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1951 Extension Work In Maryland

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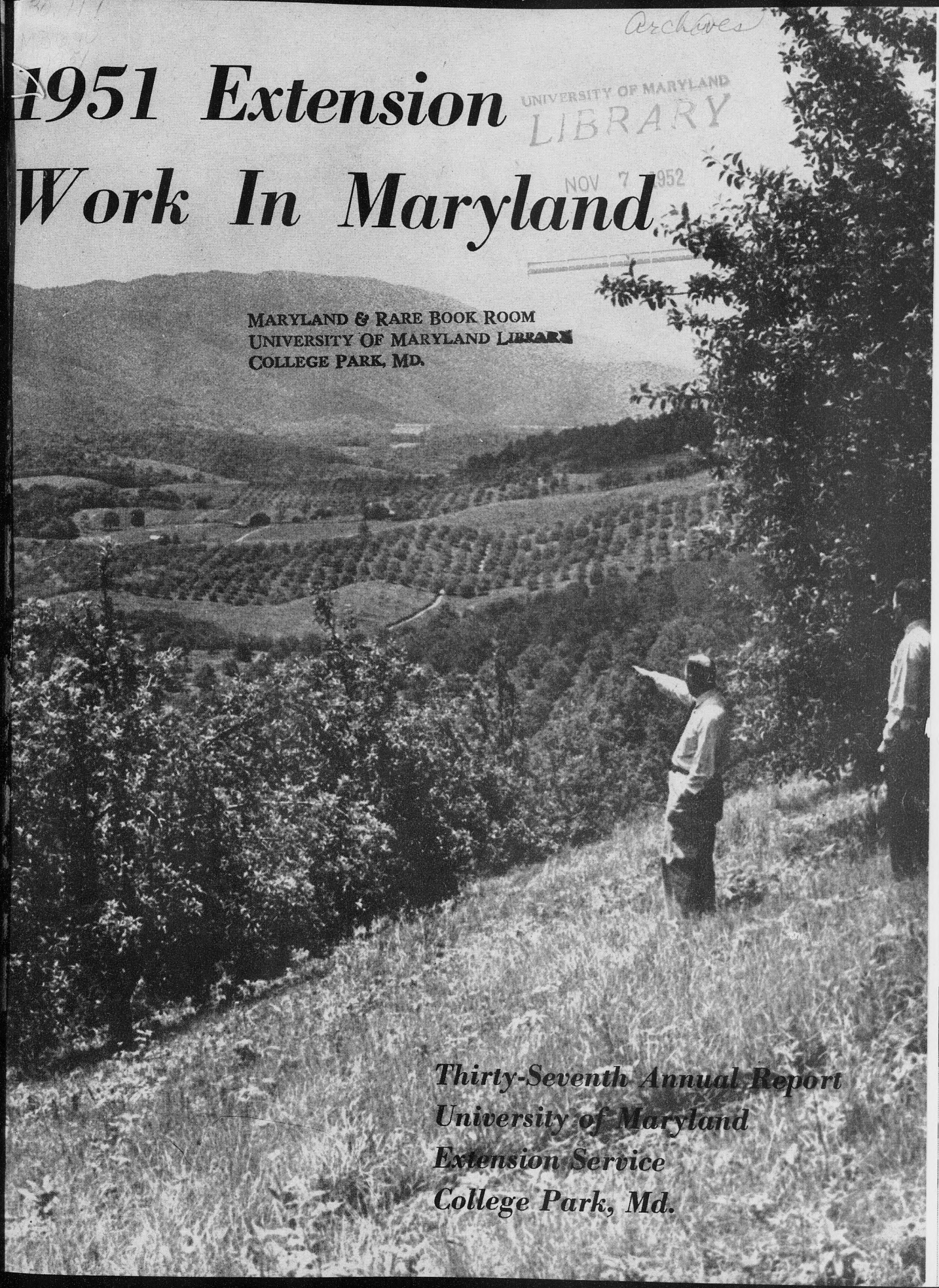

Thirty-Seventh Annual Report
University of Maryland
Extension Service
College Park, Md.

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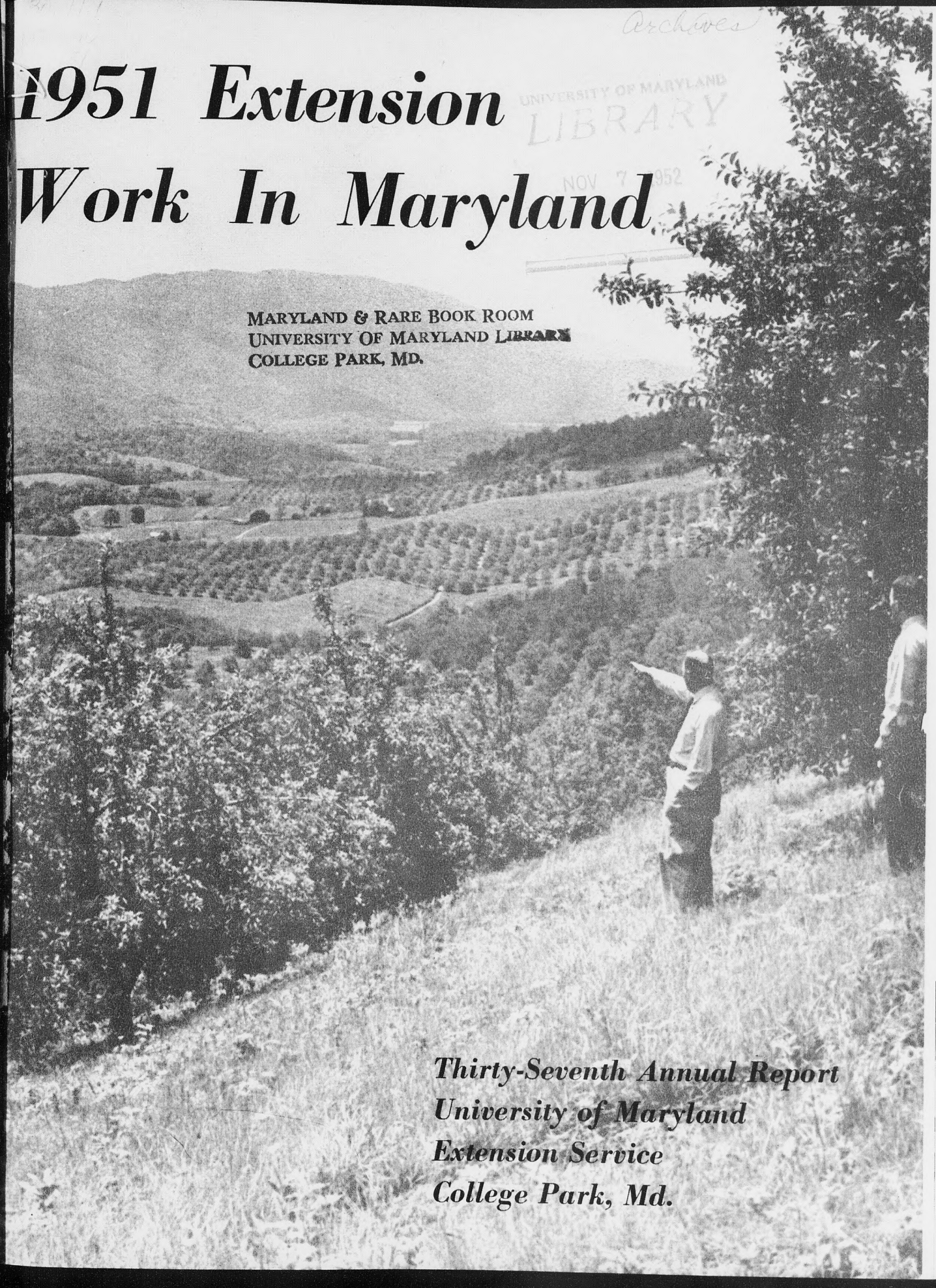

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Cooperative Extension Work in Agriculture and Home Economics, Extension Service, University of Maryland and United States Department of Agriculture Cooperating. James M. Gwin, Director. Distributed in Furtherance of Acts of Congress of May 8 and June 30, 1914.

Foreword

As you read this year's report I would like to have you keep in mind that you are reading about educational programs and activities and that your evaluation of the report, and the work it covers, will depend in part on your definition of "education".

What is education? What are the purposes and objectives to be kept in mind when offering education to out-of-school adults and to rural youth?

These are important questions. They are questions which each Extension worker must answer for himself as he goes about his duties. They are questions which rural leaders, and the farmers and homemakers they serve, must answer as they work with their Extension Service.

There is not enough space here to fully discuss the Extension approach to education, but in general terms, it is based on the belief that each farmer, homemaker, or youth is confronted with individual problems for which he is seeking a solution.

This does not mean that he is waiting for someone to come along with the perfect and complete answer. Instead, most individuals are seeking information on which they can make their own decision.

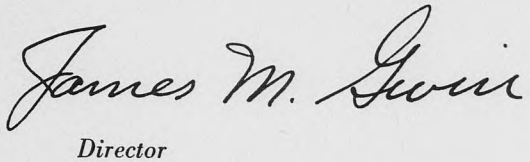
That, briefly, is the function of Extension education—to help each person learn the facts that apply to his own situation and to weigh those facts as accurately as possible. Sometimes this is easily done; perhaps it is clear cut as telling what poison will kill a certain insect or the best temperature and time for canning a vegetable.

At other times the problem may be as complex as: "What is the best system of farming for my farm?" To give effective help on this problem, Extension must avoid the "perscription" answer. True education will help in the analysis of the problem instead of offering "quick-cure" remedies.

For example, alfalfa or ladino clover are exceedingly important legume crops suited to large areas of Maryland, but even in areas of good adaptation, there may be many farms which should not grow either of them. In the field of home economics, draperies are a very appropriate addition to the furnishings in many homes. In other homes, they might be entirely out of place.

A farmer with a heavy mortgage and a large family may operate his farm entirely different from his neighbor across the fence who is out of debt and has to depend on hired labor. Yet each of them may be using the best possible system under the circumstances.

Therefore, as you read this report, keep in mind that many of the activities reported were designed to help people make up their own minds rather than to give them inflexible solutions based on generalities.



Director

Agricultural Economics and Marketing

Maryland farmers increased their sweet corn acreage 17 percent in 1951 to meet the Government's request for more sweet corn for canning.

The year 1951 will be generally recorded as another good year by Maryland farmers and homemakers. At times it was too wet to plant, at other times it was too dry for good growth, prices fluctuated, labor was a problem, but comparatively it was a good year.

Major changes in the cropping pattern in 1951 were the 11 percent increase in the acreage of corn and the approximately 10 percent increase in truck crops—primarily sweet corn and tomatoes for processing.

The work on production goals and agricultural outlook have been combined in Maryland for several years. During the winter and spring of 1951, meetings were held in all parts of the State where farmers were advised on the goals for the production of food. Mobilization reports showed a deficit of canned tomatoes and canned corn. Since Maryland is a primary producer of these commodities, emphasis was placed on informing farmers of the Government's request for an increase of 35 percent in the acreage of tomatoes and a 20 percent increase in the acreage of sweet corn. Meetings were held with farmers and canners in the major producing areas. Indications are that tomato acreage in 1951 was up 24 percent and sweet corn up 17 percent.

The Maryland Farm Record book has gained in popularity and during the year 642 copies were distributed to Maryland farmers by the county agricultural agents, and the farm management specialist. A new program of record keeping was also started this year with a group of Negro tenants who desired to set up complete farm records.

Six suggested farm lease forms have been prepared and are now available to county agents, bankers and others for distribution to farmers. During the year over 400 copies of these forms were distributed.

Father-son agreements were also a popular topic at meetings, particularly among 4-H'ers and veterans in the farm training program.

Marketing

A rather varied and extensive educational program was carried on in dairy marketing during 1951. A fluid milk pricing formula developed by the Philadelphia Class I Committee, on which a member of this department participated, was made effective early in the year and has been satisfactory to producers, handlers, and consumers.

Problems associated with inter-market price relationships have been quite acute in Maryland as

well as in other milksheds of the Northeast. The most pressing problems were those associated with sales of Class I milk from producers to handlers at less than the prevailing Class I price, if the milk was retailed outside of the marketing area. Sales of this type were made during the year under Federal Order 61 in New Jersey, also under the Boston Order and the Maryland Cooperative Milk Producers Incorporated of Baltimore.

Three Extension bulletins were prepared on fruit and vegetable marketing. One of these was a statistical report providing information on acreage production and yield per acre by counties of the major fruit and vegetables grown in Maryland. The others were concerned with the marketing of fresh fruit and vegetables to retail stores. They were designed to give retailers specific non-technical information about the losses and rate of turnover to expect under average operating conditions. They included recommendations for reducing waste and spoilage loss and increasing the turnover rate for specific fruit and vegetable commodities. A series of fruit and vegetable outlook statements slanted as much as possible toward the Maryland situation were prepared during the year for publication in the Extension Service News. Additional brief outlook statements were transcribed for radio programs broadcast in farming areas of the State.

Specialists from this department advised with a local tobacco growers committee in the formulation of legislation designed to make the determination of marketing quotas for Maryland tobacco more equitable. Representatives of this department also performed a major role in giving background information concerning the development of Federal grading and price support programs, and explaining the arguments both for and against quotas on the Maryland tobacco crop. It is believed by those intimately concerned with the tobacco industry in Maryland, including state and local PMA officials, that Maryland tobacco growers were well informed concerning the facts and purposes of the program as well as the real basis for a referendum, methods of calculating quotas, and the issues at stake prior to the referendum held on December 7, 1951.

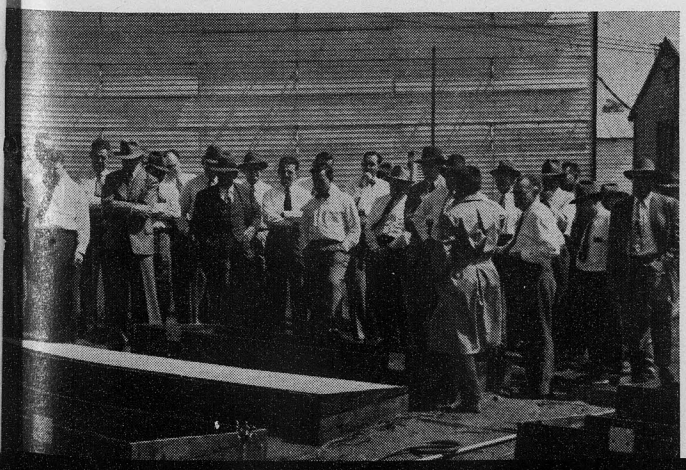
Two Extension bulletins were published on poultry marketing and in addition six articles on various phases of poultry marketing published in local and national poultry magazines. Outlook statements were prepared for presentation at local meetings as well as for radio transcription.

In the general field of public policy, Extension efforts were centered primarily on providing information to farm people concerning the application of inflation control measures to agriculture. This involved some explanation of the OPS program as it affected Maryland farmers, particularly livestock and dairy producers. Both of these commodities are important to the State, but the price control situation was much different on each.

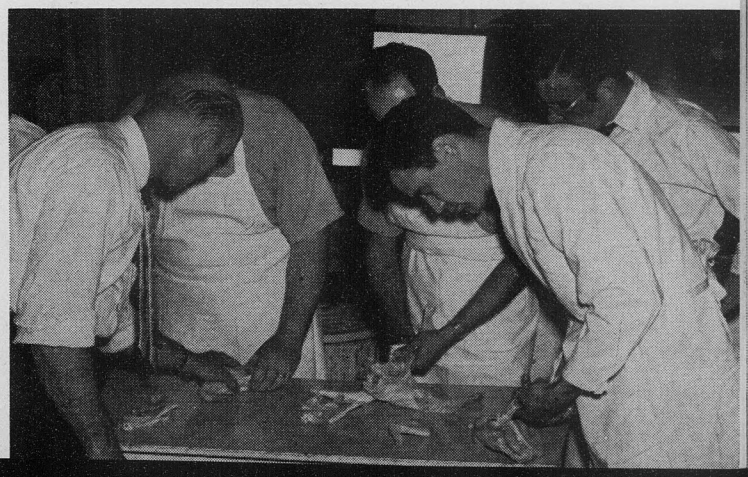
Interest in minimum price support programs for agricultural products was also maintained among farmers because of adverse criticism from popular magazine and newspaper articles, as well as the running controversy between interested agricultural groups and individuals concerning the type of program which should be perpetuated in the United States. Therefore, although the Maryland Extension Service maintained a neutral position on specific programs, specialists endeavored to present the pro and con arguments when respective programs were discussed and sought to give farmers the necessary background and understanding which should be maintained in the field of agricultural policy.

The educational program with merchandisers of fresh fruits and vegetables continued in 1951 with special emphasis on follow-up work with retailers who had previously participated in Extension classes. Talks and demonstrations were given to various wholesale, retail and consumer groups on

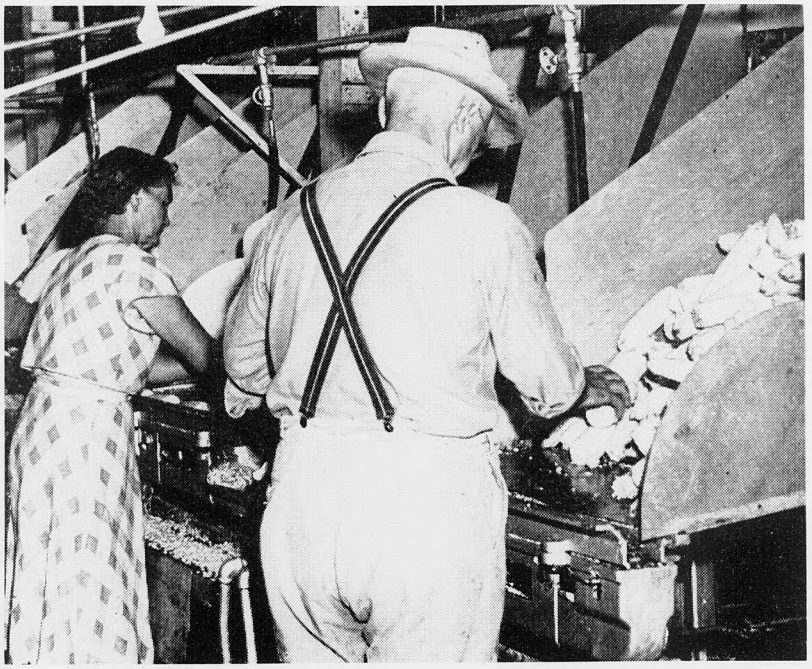
Bankers look over experimental tobacco plant beds.



Poultry retailers were taught new techniques.



Agricultural Economics and Marketing



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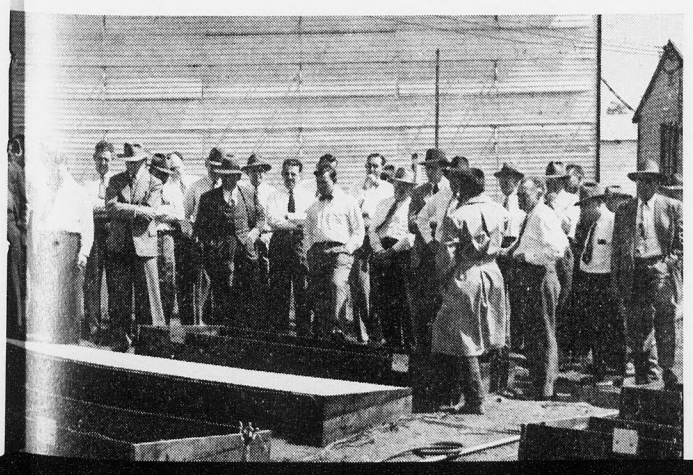

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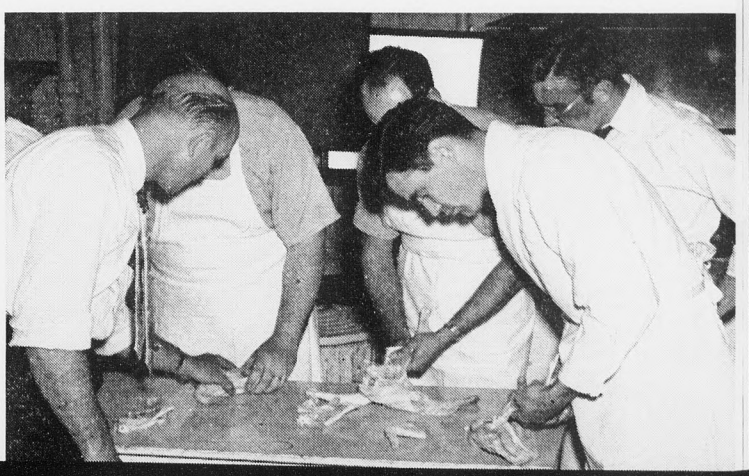

the care and preparation of fresh fruits and vegetables. Regular classes with retailers of fresh fruits and vegetables were held in Baltimore, Easton, Cambridge, and College Park.

Classes were also conducted on the promotion and selling of chicken through retail stores. These stressed techniques of cutting up birds for the sale of chicken parts to yield a maximum of cuts consumers like. Emphasis was also placed on sanitation, appearance, proper refrigeration practices and display methods. The class sessions also provided training in the fundamentals of handling, grading, and maintenance of quality in fresh eggs sold through retail stores.

A refresher course designed for consumers in the buying, handling, and preparing of fresh fruits and vegetables was conducted in various parts of the State. The nutritional value and importance of fresh fruits and vegetables in the daily diet were given special emphasis along with general market information.

Department of Markets

The Extension program of the Department of Markets received major attention. Profits were designed to (1) expand the consumption of food through consumer education, (2) provide a better market for Maryland produced eggs, (3) increase the efficiency of farm market facilities, (4) improve the marketing of Maryland grain, and (5) disseminate general marketing information.

Consumers, particularly in the metropolitan Baltimore area were constantly informed during the year of best buys. Press releases, radio and television programs, demonstrations and other methods were used to give facts about the proper selection and use of agricultural commodities. These same methods also served to increase sales of commodities as temporary surpluses developed.

In connection with the egg marketing project, an educational program, demonstrations and a joint sponsorship of an "Egg of Tomorrow Contest" were carried out in cooperation with two producer cooperatives in the State and the Maryland State Poultry Council.

Retailers whose marketing practices were detrimental to the objectives of the program were advised of the advantages of proper marketing techniques. General information on how to buy, store and market eggs, was given all egg retailers as well as facts on prices, stocks, and outlook.

Wholesalers who achieved outstanding compliance records under the Maryland Fresh Egg Law were again presented with Certificates of Merit at the annual meeting of the Maryland State Poultry Council. Demonstrations on grades, quality, and uses of eggs were presented to consumer groups, P.T.A.'s and civic organizations.

Results of the program are evident. More Maryland-produced quality eggs are appearing on the Baltimore market. Wholesalers and retail merchants have improved their methods of handling and storing. Consumers have become grade conscious and are demanding and receiving better quality eggs.

Grain grading and marketing schools in Easton and Westminster were again held in the spring of 1951. A grain market report was mailed weekly to approximately 1,000 producers and grain handlers in the State. Information on harvesting, storing, grading and marketing of grain was prepared and released to daily and weekly newspapers and radio stations. Charts showing grade requirements of corn and wheat were reproduced and distributed to all grain handlers in the State.

One elevator superintendent in Baltimore has reported that, as a result of some of these activities, grain has been better marketed. This was evidenced by more uniform quality in cars, more evenly loaded cars, and advance notice of cars containing high moisture grain.

Work was begun with a strawberry auction block to ascertain how more attractive prices might be realized by the growers. Improvement in the quality of the fruit was suggested as the primary step toward accomplishing the objective. A demonstration was developed to prove that proper supervision of pickers and an incentive plan for more careful pickers would pay for itself in improved quality and higher returns. The initial results of the demonstration warrant continued work along these lines and the program will be expanded in 1952.

A program on livestock conservation was started at the Maryland State Fair. The cooperation of livestock auctions in the State has been enlisted to further carry out the objectives of the program. Illustrated charts and pictures on handling livestock were distributed. Demonstrations and meetings on grading animals and livestock conservation were held throughout the state for farm groups including 4-H Clubs, vocational agriculture students and meat packers.

Agricultural Engineering

Frederick county agent, H. R. Shoemaker, looks over some green leafy alfalfa with Willard C. Van Sant, Mt. Airy. The hay was dried with heated air in a barn Extension agricultural engineers helped design.

Agricultural engineering specialists have helped to make Maryland farms and homes more convenient, efficient, and pleasant places in which to work and live. Assistance was given in construction, remodeling and repair of homes and farm buildings, use of electricity, care of farm machinery, fire prevention, and care and repair of home equipment.

High wages and a labor shortage make it necessary to put electricity to work on the 91 percent of Maryland's farms that are electrified.

Agricultural engineering specialists assisted farmers, homemakers and Extension agents with electrical problems relating to grain storage, handling and grinding; design and operation of hay dryers; farmstead rewiring and improved lighting; farm freezer cabinet operation, design, and management; care, repair and maintenance of equipment and motors; farm use of heat lamps and 4-H Club work.

The information was taken to the farmers in the form of publications, news releases, radio talks, 27 group demonstrations, and illustrated presentations at agricultural meetings. Assistance was also given on farms for many of the farmers' problems require individual attention.

Training meetings for utility company field men and Extension agents were held. Assistance was given the United States Department of Agriculture with the revision of the bulletin, "Light for the Farm." The locker industry ran a second reprint, 20,000 copies, of the Extension bulletin, "Freezing Quality Foods." Extension information was spread, also, by 4-H Club members, who gave 141 electrical demonstrations in 16 counties.

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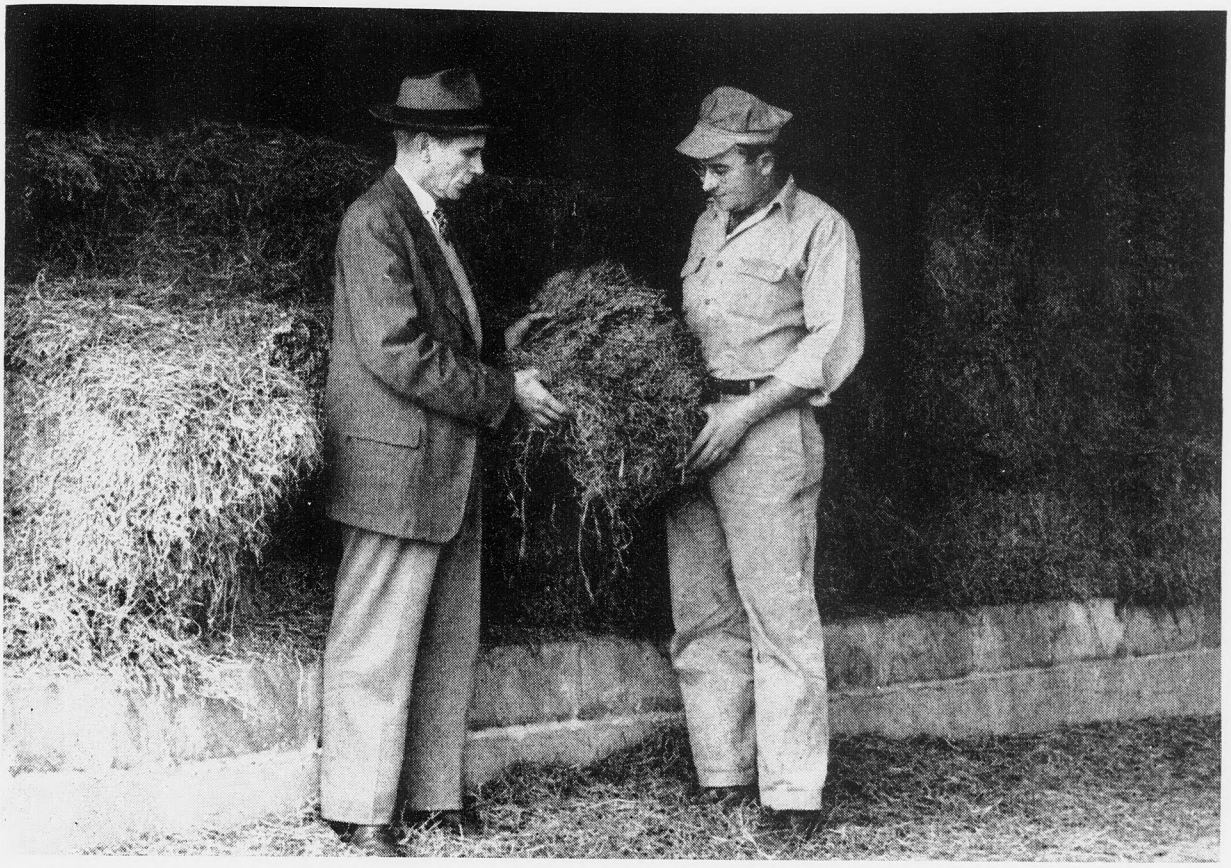
Agricultural Engineering



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Agricultural Engineering

working drawings for approved designs of farm structures and equipment and farm homes, to anyone who requests them. A large variety of designs are available because requests cover almost every conceivable type, style and size of structure. Every effort is made by the department to find a plan which accurately meets the inquirer's desires, or can be made to do so with minor changes. During the year, 955 sets of farm building plans were sent to 388 individuals in response to their specific requests.

Some 16,000 Maryland farm families were helped in building problems in 1951.

Extension agents report for 1951 that some 1600 families were helped with building problems; 250 were helped with the construction of new dwellings, 503 with the remodeling of dwellings, 423 with the construction of farm buildings and 353 families were assisted in repairing farm buildings. In addition, 110 were helped in the selection and construction of farm building equipment.

The Farm Home and Buildings Manual, in county agent and home demonstration agent offices, places a wide variety of information at the agents' fingertips for farm family assistance. The manual is of loose-leaf type and is kept up to date as revised material becomes available.

The principal obstacle to the effective use of many acres of level land in Maryland is inadequate drainage. A program to assist farmers with this problem has been in operation for the past 25 years.

A large portion of this work is concentrated in the lower six counties of the Eastern Shore. In 1951 the Extension drainage specialist, in addition to work with large cooperative drainage operations, assisted farmers with 169,995 feet of open ditch work and 1200 feet of tile drainage. A total of 171 Public Drainage Associations, generally referred to as "Tax Ditches," have been organized on the Eastern Shore to provide outlet drainage facilities for farm ditches and tile drains on 4000 farms.

As a result of Extension Service assistance, several contractors have sufficient experience to do many jobs on private farms without additional aid or engineering help. The drainage specialist is also cooperating with the Production and Marketing Administration and the Soil Conservation Service. A great deal of assistance has been given in laying out drainage systems on individual farms where the farmer is interested in getting credit in connection with drainage payments.

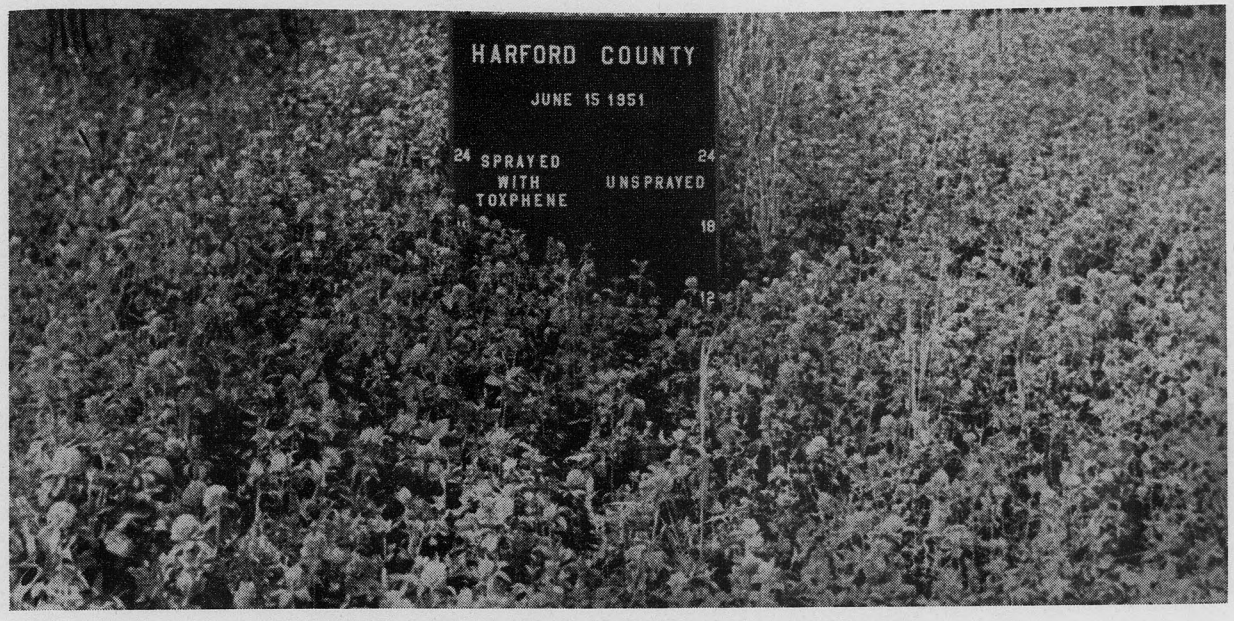
Farmers along the coast are becoming more conscious of the value of preventing shore erosion. Two demonstrations by the State Soil Conservation Committee, one in Queen Annes County, and one in Talbot County, are performing satisfactorily.

High first-cost of new farm machinery and limited production, due to material allocations, have kept the problems of care, repair, maintenance and efficient use of farm equipment in the foreground. New developments in farm machinery, especially those with a labor saving angle, brought many inquiries to the Agricultural Engineering Department.

Tractor maintenance was emphasized primarily through the 4-H Club program. A central leader training school was attended by 75 club leaders. Tractor operator contests were attended by better than 3,500 farm people.

Field demonstrations on plow hitching and adjustment were enthusiastically received by farm operators. Veteran on-the-farm training groups were given instruction on the better care and maintenance of the tractor as well as the other farm machinery. County agents reported that 285 farmers were assisted in selection of machinery and 1063 farmers followed instructions on maintenance and repair.

The home equipment repair program remains an outstanding feature of the work with the rural women of Maryland. Sewing machine cleaning, care and adjusting; electrical equipment, care, repair and selection; tool selection, care and proper use; along with the care and repair of mechanical installed equipment and home water facilities stood out in their 1951 Extension programs.



This shows the effect of spraying for spittlebugs.

Special emphasis was given in the agronomy program to: (1) an increased use of certified clover and alfalfa seed of suitable origin, (2) the use of herbicides to control weeds in corn and alfalfa, (3) more careful sampling of land for soil tests and better use of the laboratory test results, (4) the management of tall growing pastures to maintain legume stands, and (5) demonstrations, in cooperation with the Entomology Department, on the control of spittlebugs in alfalfa and red clover hay crops.

These practices, as well as many others, were emphasized in winter meetings in cooperation with other departments in ten counties. They were also stressed through publications, news releases, radio talks, and other educational programs. Special meetings during the year included a series with fertilizer dealers with an attendance of approximately 225; six regional meetings with vocational agricultural teachers and veteran teachers to discuss forage crop programs; other conferences with these teachers to give current recommendations on the use of lime and fertilizer; and the annual meeting of the Maryland Crop Improvement Association with more than 500 people attending.

One of the most satisfactory methods of encouraging the use of improved methods in the production of field crops has been the demonstrations carried on in cooperation with other departments and county agents throughout the state. Particular emphasis was given this year to demonstrations in four counties on the use of sprays to control spittlebugs. These were conducted in stands of both red clover and alfalfa. They proved generally successful and resulted in increased yields. Seven counties cooperated in demonstrations of wheat and spring oat varieties, while eight counties carried on fifteen corn fertilization demonstrations. The corn plots indicated that the average yield in Maryland may be easily increased by as much as 50 percent through intelligent use of improved practices. They demonstrated the importance of adjusting fertilizer recommendations to the particular soil in which the crop is to be grown. Nitrogen, for example, gave large increases on soils of low fertility, but produced little response on soils being farmed with a good rotation with plenty of manure and fertilizer added. Other field demonstrations included two on the fertilization of wheat, several on the control of weeds with special emphasis on the chickweed and alfalfa and the use of 2,4-D in corn, and five on increasing the productivity and longevity of alfalfa stands through proper use of fertilizer.

Extension agronomists took part in the planning and conducting of two Maryland Agricultural Experiment Station Field Days this year. One was held on the Plant Research Farm, and the other on the University Tobacco Experimental Farm. A total of approximately 1500 people attended these Field Days. They also helped to conduct the third Maryland Greener Pastures Contest, sponsored by the Production and Marketing Administration. Interest in the contest has increased each year with 367 farms entered in 1951.

Agricultural Engineering

working drawings for approved designs of farm structures and equipment and farm homes, to anyone who requests them. A large variety of designs are available because requests cover almost every conceivable type, style and size of structure. Every effort is made by the department to find a plan which accurately meets the inquirer's desires, or can be made to do so with minor changes. During the year, 955 sets of farm building plans were sent to 388 individuals in response to their specific requests.

Some 16,000 Maryland farm families were helped in building problems in 1951.

Extension agents report for 1951 that some 1600 families were helped with building problems; 250 were helped with the construction of new dwellings, 503 with the remodeling of dwellings, 423 with the construction of farm buildings and 353 families were assisted in repairing farm buildings. In addition, 110 were helped in the selection and construction of farm building equipment.

The Farm Home and Buildings Manual, in county agent and home demonstration agent offices, places a wide variety of information at the agents' fingertips for farm family assistance. The manual is of loose-leaf type and is kept up to date as revised material becomes available.

The principal obstacle to the effective use of many acres of level land in Maryland is inadequate drainage. A program to assist farmers with this problem has been in operation for the past 25 years.

A large portion of this work is concentrated in the lower six counties of the Eastern Shore. In 1951 the Extension drainage specialist, in addition to work with large cooperative drainage operations, assisted farmers with 169,995 feet of open ditch work and 1200 feet of tile drainage. A total of 171 Public Drainage Associations, generally referred to as "Tax Ditches," have been organized on the Eastern Shore to provide outlet drainage facilities for farm ditches and tile drains on 4000 farms.

As a result of Extension Service assistance, several contractors have sufficient experience to do many jobs on private farms without additional aid or engineering help. The drainage specialist is also cooperating with the Production and Marketing Administration and the Soil Conservation Service. A great deal of assistance has been given in laying out drainage systems on individual farms where the farmer is interested in getting credit in connection with drainage payments.

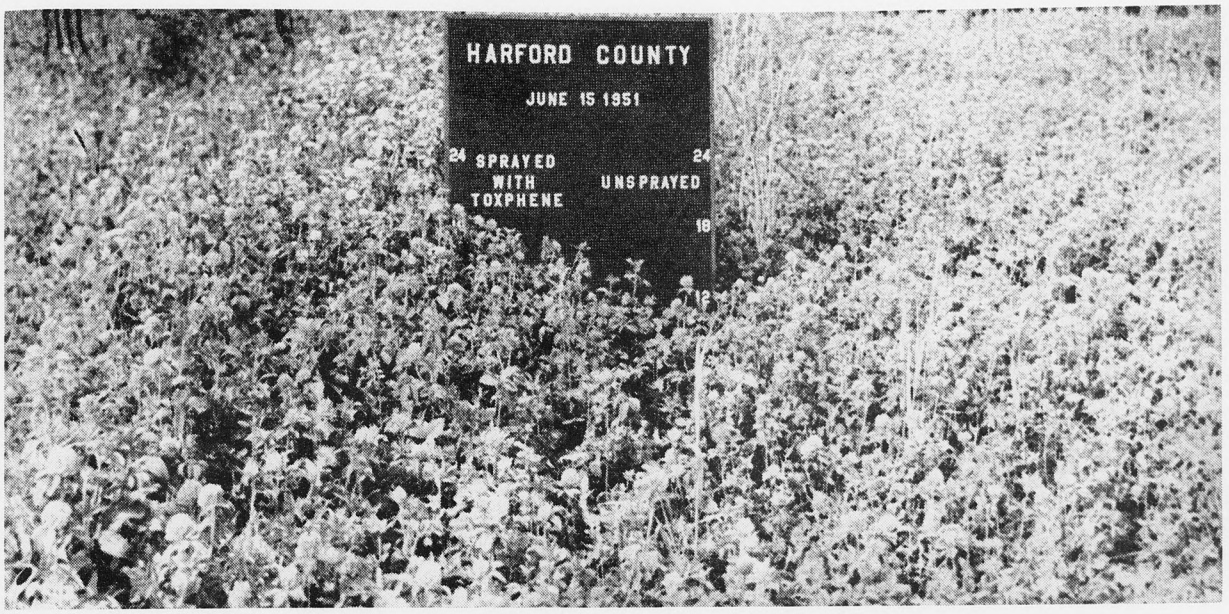
Farmers along the coast are becoming more conscious of the value of preventing shore erosion. Two demonstrations by the State Soil Conservation Committee, one in Queen Annes County, and one in Talbot County, are performing satisfactorily.

High first-cost of new farm machinery and limited production, due to material allocations, have kept the problems of care, repair, maintenance and efficient use of farm equipment in the foreground. New developments in farm machinery, especially those with a labor saving angle, brought many inquiries to the Agricultural Engineering Department.

Tractor maintenance was emphasized primarily through the 4-H Club program. A central leader training school was attended by 75 club leaders. Tractor operator contests were attended by better than 3,500 farm people.

Field demonstrations on plow hitching and adjustment were enthusiastically received by farm operators. Veteran on-the-farm training groups were given instruction on the better care and maintenance of the tractor as well as the other farm machinery. County agents reported that 285 farmers were assisted in selection of machinery and 1063 farmers followed instructions on maintenance and repair.

The home equipment repair program remains an outstanding feature of the work with the rural women of Maryland. Sewing machine cleaning, care and adjusting; electrical equipment, care, repair and selection; tool selection, care and proper use; along with the care and repair of mechanical installed equipment and home water facilities stood out in their 1951 Extension programs.



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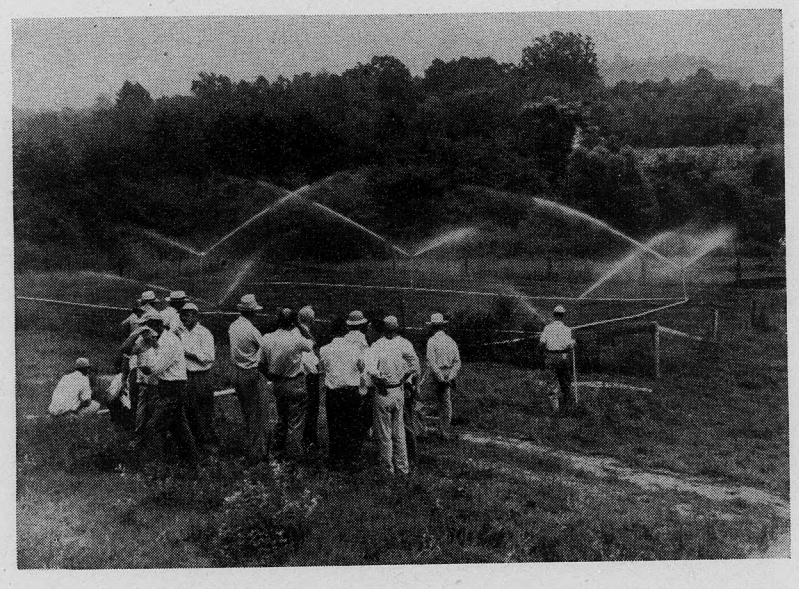
Agronomy



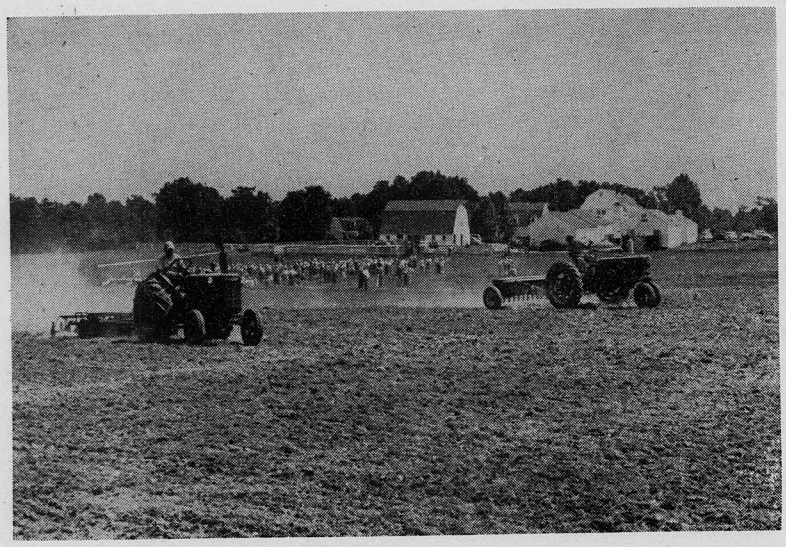
Plant bed irrigation demonstration at the Tobacco Field Day.

A new phase of the Extension program this year was a Students' Pasture Judging Contest for the vocational agriculture students of six high schools in Central Maryland. This contest was conducted in cooperation with the State Department of Education.

During each of the last 10 years Extension agronomy workers have developed a few complete cropping system plans for individual farms. Time involved to prepare a farm plan could not be justified for the individual farmer except on the basis that these farms serve as demonstrations in their communities. Past experience has shown that such plans have been valuable to farmers who have used the plans.

The soil testing laboratory analyzed and made recommendations for 7,815 samples of soil during 1951. In cooperation with the Maryland Agricultural Experiment Station, studies are now being made of ways to improve the chemical tests. Also, consideration is being given labor saving equipment that can increase the efficiency of the laboratory personnel.

A total of 36,872 bushels of seed was officially tagged and sealed and made available to Maryland farmers under this program in 1951. A much larger amount of seed was inspected in the field and found desirable for seed purposes. This program has served to assure Maryland farmers that they are receiving the recommended varieties available for use.



Pasture renovation demonstration at the Agronomy Field Day.

Animal Husbandry

Looking over some of the University's pigs at the Swine Field Day.

Working with livestock producers to improve breeding systems and management is the important task of Extension livestock specialists. Demonstrations, field days, livestock shows, and purebred sales are used to give information and encourage farmers in approved methods.

Much has been accomplished by Extension workers through the use of demonstration farms. The owners of these farms, to learn better management and breeding systems, lend their facilities as a place for meetings, demonstrations, and tours. Neighboring farmers welcome the chance to study their practices and discuss new developments in the industry.

Seven sheep demonstration farms, located in four areas of Maryland, are being used for this type of education. Fourteen counties have swine demonstration farms. New demonstration farms were established in three counties. Several beef producers cooperate in the demonstration farm program.

Beef cattle continued to hold the center of the stage in livestock Extension work. Since prices remained reasonably favorable, beef production was stimulated and the Extension Service was called upon for more assistance than ever. Many out-of-state requests for help in selecting Maryland farms for beef cattle production were received and appropriate help given.

Relatively high feed prices encouraged farmers to use pasture, hay and silage in cattle rations. Livestock men showed special interest in information concerning these forage crops and the trend toward grassland farming continued.

During 1951 there was a continued increase in the number of sheep grown in Maryland. Several carlots of western ewes were shipped to Baltimore County and a double deck shipment went to Cecil County. Smaller lots were distributed in Harford and Howard Counties.

A big development in the sheep program in Maryland occurred in 1951. With assistance of Extension personnel, the Baltimore County Sheep Breeders' Association, formed in 1950, became the Maryland Sheepbreeders' Association. The group sponsored several sheep programs, including (1) the flock improvement project; (2) procuring of western ewes; (3) a ram and ewe sale; and (4) a field day and tour of ewe flocks located in Baltimore County.

Sheep shearing schools were held to teach growers proper methods of shearing and preparing wool for market. Two-day schools were held on the Eastern Shore and in Baltimore County. These schools included an evening meeting and proved to be an effective way of getting necessary information across.

In addition to the schools, four one-day demonstration meetings were held in various sections of the state which were not covered by the two-day schools. At these meetings, the breeders' flock management problems were also given consideration.

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Botany

Black shank is now present on six tobacco farms in three Southern Maryland counties.

Research work and Extension demonstrations show that disease control is necessary for high production of quality fruits, vegetables, and grains. Disease control methods include: (1) protection of crops by sprays or dusts; (2) use of disease resistant varieties—particularly against soil-borne organisms; (3) use of seed and bulb treatments; and (4) use of eradicants to destory organisms in soil or in over-wintering sites.

An increasingly large number of fungicides are available to agricultural workers in Maryland. To help growers combat the numerous diseases of all crops, Extension personnel strive to supply timely information on prevalence of disease and control practices. This is accomplished by mimeographed and printed articles, by letter, by radio broadcasts, and by personal visits to farms.

Plant disease specialists attended 171 meetings where crop disease control practices were given to about 18,000 people. Also, approximately 100 plant specimens were received in the mail by the department with requests for diagnosis and control measures. Field days for fruit, tobacco, and vegetable growers were held where plant disease specialists demonstrated the necessity and value of crop protection.

Extension plant pathologists attended ten county meetings for canners and growers where the disease situation and spray program was explained to 1,200 persons. Increased interest in this program is manifested by increased sales of spray and dust equipment, by the adoption of wide rows and improved cultural practices. The average yield of tomatoes for Maryland in 1951 was 7.5 tons per acre on 30,500 acres, an increase of 3,500 acres over the previous year.

The Tomato Improvement Program, started in 1949, was continued and expanded. A Fact Sheet series on all phases of tomato production was prepared; specialists in plant pathology cooperated in the preparation of four of them which received a total distribution of 17,000.

Tomato spray tests were conducted on the University of Maryland Vegetable Research Farm at Salisbury, Maryland. Recently introduced fungicides were tested against the standard spray schedule and

demonstrated to visitors on the Vegetable Field Day and on other occasions to grower-groups and canners. Manganese ethylene bisdithiocarbamate in 6 applications caused significantly higher yields than the unsprayed plot and will be suggested for grower use on the Eastern Shore.

The use of only inspected tomato plants was encouraged. The majority of imported plants are inspected in state of origin. Approximately one million plants were inspected on arrival; no serious diseases were found.

A demonstration plot of peppers was established near Hurlock, Maryland, and sprayed with fungicides to evaluate a spray schedule. None of the treatments regardless of date of application significantly increased the yield of marketable peppers.

Spray schedules were also made available to cantaloupe, cucumber, and melon growers. A vegetable disease chart for Maryland was prepared for market growers and home gardeners. Forty-three hundred copies of the chart were distributed. Diseases of snap beans, lima beans, peas, crucifers, and sweet potatoes were of relatively minor importance.

Control work on tree fruit diseases was continued in 1951 with the preparation of the "Maryland Spray Calendar for Apples and Peaches." Ten county fruit meetings were held to discuss fruit diseases and spray schedules. A steady demand for Bulletin 125, "Sprays for Home Fruit Plantings," was an indication of great interest in home orchards and in production of small fruit at home for canning and freezing.

Data obtained from field plots at Hancock, Maryland, indicated that spray materials have a role in the "finish" or appearance of the harvested fruit. The recently introduced organic fungicides such as organic mercury, glyoxalidine acetate, and trichloromethyl thio tetrahydrophathalimide have for two years controlled the major diseases of apple; the appearance of fruit from these plots has been excellent.

The purchase of a new type sprayer presented an opportunity to compare semi-concentrate and dilute sprays. Under the conditions of the 1951 tests, the number of apples with scab on concentrate sprayed plots was higher than where dilute concentrations were applied. More work is required on this phase of the spray operation.

An above normal crop of peaches, approximately 722,000 bushels, was harvested in Maryland in 1951. The crop was practically free of brown rot. A service similar to that for apples—which includes publication of spray calendar, mailing of spray cards, fruit meetings, and orchard visits—is conducted for peach growers. Peach bacterial spot caused heavy premature defoliation in several orchards in Washington County, after being absent for a period of 8 years. Peach leaf curl was of general occurrence; growers must apply the dormant spray to prevent defoliation. Peach yellows, a virus disease, caused the removal of trees in bearing orchards.

A survey of tobacco was conducted in 1951 to determine the extent of black shank and other root diseases. Black shank was found to be more serious than it appeared to be in 1950. The disease is now known to be present on 6 farms in 3 counties of Southern Maryland with approximately 55 acres of land involved. The organism was brought into Maryland on tobacco plants from southern states in 1945 or 1946. Black shank is a fungus disease of field tobacco. The fungus lives in the soil and causes a root rot which results in permanent wilting and death. The organism is spread by water, farm machinery or man and animals carrying soil from field to field. Infected stalks that are thrown on the ground after stripping may increase the amount of the fungus in a field. Granville wilt, a bacterial disease, was found in four areas, two in Anne Arundel County and two in Charles County. Fusarium wilt was found to be widespread; fifteen fields were found to be infested with this disease. Root knot nematode was found in nine fields.

Where black shank and Granville wilt were found, growers cooperated by using recommended control practices. These include: (1) removal of the infested field from cultivation of any crop requiring the use of plow, disc, barrow, etc.; (2) the destruction of tobacco stalks from black shank fields; (3) the

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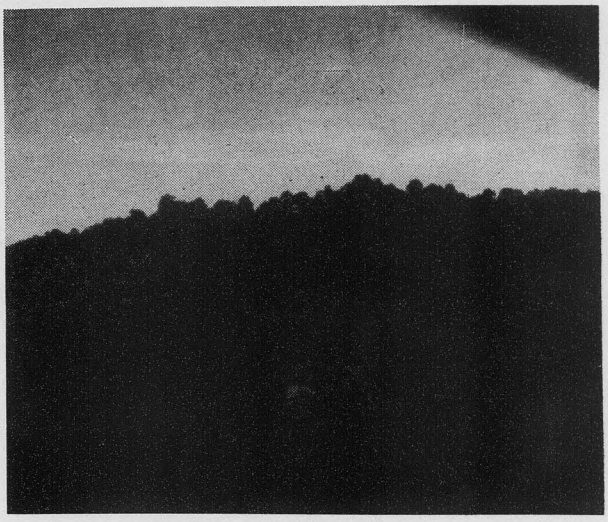

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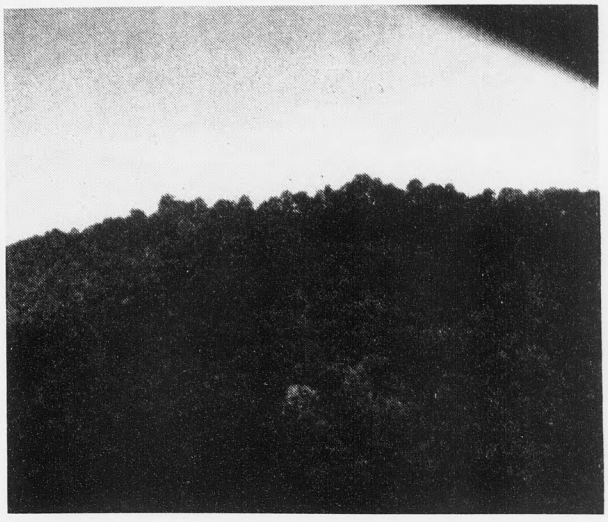


Botany

removal of soil from farm machinery and sterilizing that machinery; and (4) the production of tobacco plants within the state and no importation of plants from other states.

Four publications on tobacco disease control were prepared and 15,000 copies were distributed in cooperation with county agents.

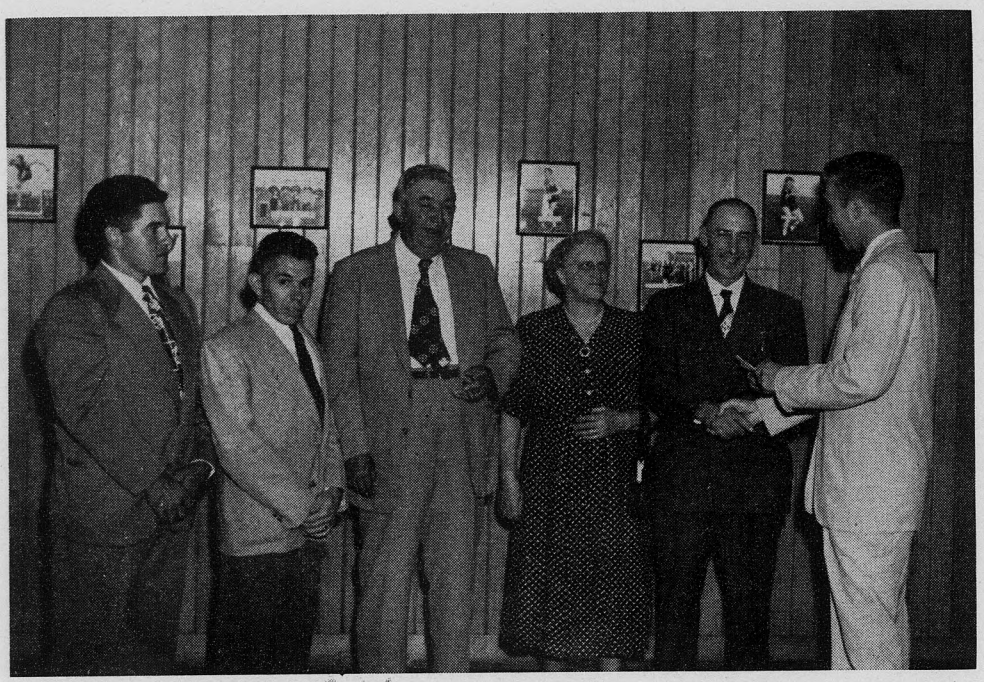
Oak wilt was found in Garrett County in Western Maryland on July 19, 1951. A survey party including personnel from the Department of Botany, University of Maryland; Department of State Forests and Parks; Department of Research and Education; and the U. S. Department of Agriculture discovered the diseased trees when investigating reports of dying oaks in the mountainous region of the state. The fungus was isolated by Dr. W. F. Jeffers and confirmation was received from the Oak Wilt Laboratory in Missouri. Seven trees, including red chestnut and white oak appeared to be infected. Some of the trees had been killed two or three years ago, and two red oaks had died in 1951.

An aerial survey with excellent cooperation from the Maryland Wing Civil Air Patrol was made as 15 aircraft patrolled a total of 900 square miles. Thirty-nine locations of "off-color" trees were located on geological survey maps. Thirty-two of these locations were later visited by ground crews. Isolation attempts from samples of oak failed to reveal additional locations of oak wilt. In addition to the samples collected as a result of the aerial survey, many other suspected oaks were examined and samples cultured. All of these attempts to isolate the oak wilt fungus were negative.

A number of Fact Sheets were prepared on culture, disease control, and insect control of sweet potatoes. This is an important crop in Maryland for fresh market consumption and canning. In 1951, approximately one million cases of sweet potatoes were canned in Maryland. Black rot, scurf, and stem rot cause considerable loss to this crop each year. However, wider adoption by commercial growers of chemical treatment for "seed" sweet potatoes and sprouts was evident. As a result, there has been better control of sweet potato diseases. Puratized Agricultural Spray is an inexpensive chemical which has been effective for "seed" and sprouts.

Two fact sheets were prepared in the Botany Department in cooperation with Horticulture. They were Number 7, "Preparation of Sweet Potato Seedbeds" and Number 8, "Bedding Sweet Potatoes."

Dairy



Presentation of awards for the Efficient Dairy Production Contest.

The latest figures released by the United States Department of Agriculture show that Maryland has 255,000 dairy cows two years old and over. This is an increase of 10,000 over the preceding year. The amount of milk produced by Maryland dairy cows during the calendar year of 1950 was 1,316,000,000

pounds as against 1,249,000,000 pounds produced during 1949.

Efficient milk production continued to be the keynote of the Extension dairy program. The costs that go into the production of a hundred pounds of milk continued to increase more rapidly than the prices paid for milk. Under these conditions the dairy farmer naturally gets a smaller net income per cow unless he can reduce his costs of milk production through the use of more efficient dairy practices.

To stimulate dairymen to adopt improved dairy practices that will lead to more efficient production, the Extension dairymen prepared an educational program of meetings, tours, demonstrations, publicity, and prepared and distributed timely circulars and leaflets. The overall dairy farm problems that received the greatest emphasis during the year were (1) production testing; (2) improved breeding; (3) improved herd management; (4) an economical and efficient dairy feed program and (5) 4-H dairy club work.

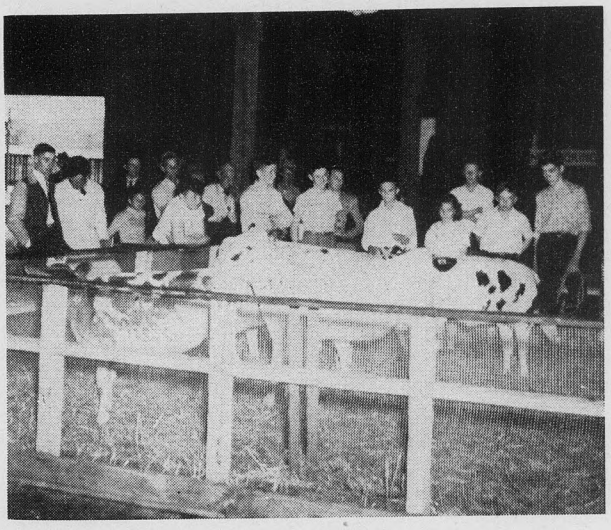
There are many well organized groups such as the Dairy Herd Improvement Associations, the State Dairy Cattle Breed Associations, the Maryland Artificial Breeding Cooperative, the Maryland Milk Producer Associations operating in Maryland, and the organized 4-H Club groups. Effective use was made of volunteer local leaders by working with and through these organized groups.

Practical feeding and management was considered the cornerstone of efficient dairy production. Emphasis was placed on the following: (1) standards of efficient dairy production; (2) feeding the milking herd; (3) raising better dairy calves; and (4) herd health problems.

One-day feeding and management meetings were held in 11 counties. A total of 816 dairymen attended these meetings.

There has been a considerable increase in the number of dairymen using the cooperative artificial breeding service, and in the total number of cows bred during the past year. Twenty local breeding circuits now serve the State. More than 2400 dairymen are members of the Cooperative. Ninety-five percent of the dairy cow population of the State is located in the area covered by the breeding circuits. During the year there were 29,252 first services. This is an increase of 4,121 over the previous year.

The artificial breeding program can have a tremendous influence on the inherent ability of Maryland dairy cows to produce more milk and butterfat as shown by the fact that, on an average, 975 cows were bred to each of the 30 outstanding dairy sires maintained in the studs.



4-H club members selecting purebred dairy calves at one of the heifer-distribution parties.

The bulls in the stud have 301 daughters that have completed production records in Dairy Herd Improvement Associations. These daughters average 9,789 pounds of milk and 440 pounds of butterfat. This is an average production per cow of 4,189 pounds of milk and 215 pounds of butterfat greater than the average production of all dairy cows in the State.

During the year 16 local dairy cattle breeding meetings were held and a total of 582 dairymen attended.

One of the major Extension activities in cooperating with the activities of other dairy groups was to work with the State Dairy Cattle Breed Associations in organizing, planning, promoting annual and district meetings, field day shows, and other activities to benefit the dairymen.

Between May 30 and August 16 a total of 15 dairy cattle field days were held throughout the State. Interest and participation in these shows reached an all time high this year as 1,124 animals were exhibited by 441 exhibitors. Compared with last year there were 34 additional exhibitors and an increase of 83 head of cattle shown. A special effort was made by the Extension dairymen to make the show as educational as possible to those attending. Classification

Botany

removal of soil from farm machinery and sterilizing that machinery; and (4) the production of tobacco plants within the state and no importation of plants from other states.

Four publications on tobacco disease control were prepared and 15,000 copies were distributed in cooperation with county agents.

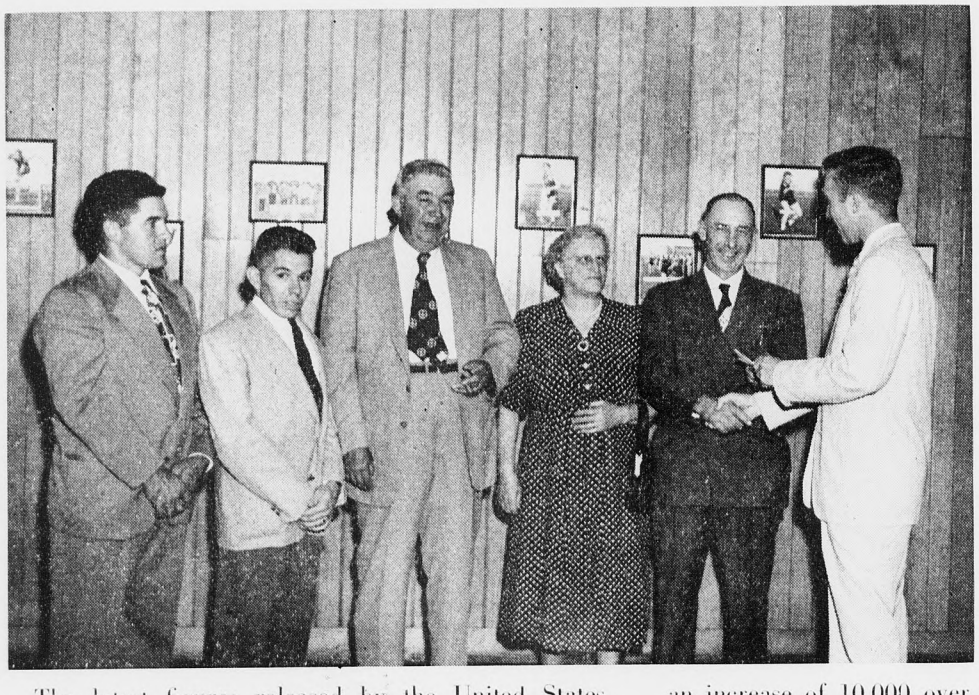
Oak wilt was found in Garrett County in Western Maryland on July 19, 1951. A survey party including personnel from the Department of Botany, University of Maryland; Department of State Forests and Parks; Department of Research and Education; and the U. S. Department of Agriculture discovered the diseased trees when investigating reports of dying oaks in the mountainous region of the state. The fungus was isolated by Dr. W. F. Jeffers and confirmation was received from the Oak Wilt Laboratory in Missouri. Seven trees, including red chestnut and white oak appeared to be infected. Some of the trees had been killed two or three years ago, and two red oaks had died in 1951.

An aerial survey with excellent cooperation from the Maryland Wing Civil Air Patrol was made as 15 aircraft patrolled a total of 900 square miles. Thirty-nine locations of "off-color" trees were located on geological survey maps. Thirty-two of these locations were later visited by ground crews. Isolation attempts from samples of oak failed to reveal additional locations of oak wilt. In addition to the samples collected as a result of the aerial survey, many other suspected oaks were examined and samples cultured. All of these attempts to isolate the oak wilt fungus were negative.

A number of Fact Sheets were prepared on culture, disease control, and insect control of sweet potatoes. This is an important crop in Maryland for fresh market consumption and canning. In 1951, approximately one million cases of sweet potatoes were canned in Maryland. Black rot, scurf, and stem rot cause considerable loss to this crop each year. However, wider adoption by commercial growers of chemical treatment for "seed" sweet potatoes and sprouts was evident. As a result, there has been better control of sweet potato diseases. Puratized Agricultural Spray is an inexpensive chemical which has been effective for "seed" and sprouts.

Two fact sheets were prepared in the Botany Department in cooperation with Horticulture. They were Number 7, "Preparation of Sweet Potato Seedbeds" and Number 8, "Bedding Sweet Potatoes."

Dairy



Presentation of awards for the Efficient Dairy Production Contest.

The latest figures released by the United States Department of Agriculture show that Maryland has 255,000 dairy cows two years old and over. This is an increase of 10,000 over the preceding year. The amount of milk produced by Maryland dairy cows during the calendar year of 1950 was 1,316,000,000

pounds as against 1,249,000,000 pounds produced during 1949.

Efficient milk production continued to be the keynote of the Extension dairy program. The costs that go into the production of a hundred pounds of milk continued to increase more rapidly than the prices paid for milk. Under these conditions the dairy farmer naturally gets a smaller net income per cow unless he can reduce his costs of milk production through the use of more efficient dairy practices.

To stimulate dairymen to adopt improved dairy practices that will lead to more efficient production, the Extension dairymen prepared an educational program of meetings, tours, demonstrations, publicity, and prepared and distributed timely circulars and leaflets. The overall dairy farm problems that received the greatest emphasis during the year were (1) production testing; (2) improved breeding; (3) improved herd management; (4) an economical and efficient dairy feed program and (5) 4-H dairy club work.

There are many well organized groups such as the Dairy Herd Improvement Associations, the State Dairy Cattle Breed Associations, the Maryland Artificial Breeding Cooperative, the Maryland Milk Producer Associations operating in Maryland, and the organized 4-H Club groups. Effective use was made of volunteer local leaders by working with and through these organized groups.

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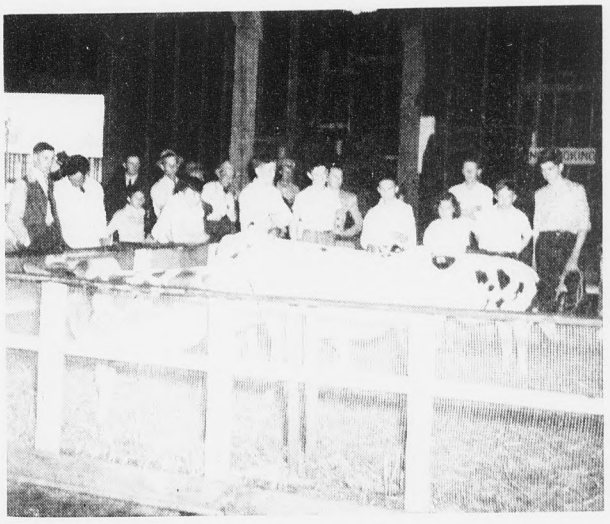

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In 1951, dairy specialists continued to give strong support to 4-H Dairy Club work. Some of the main objectives were: first, to locate acceptable animals for the 1951 projects; secondly, to train boys and girls in proper methods of raising calves and heifers; and thirdly, to teach them improved dairy practices. The specialists feel that boys and girls, if given good instruction and training during their years in 4-H Club work, will pay big dividends to the Maryland dairy industry in future years.

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The Maryland 4-H Dairy Judging Team that won the 1950 contest at Waterloo represented the United States in the International Contest at the Royal Show, Cambridge, England. The Maryland team won this international contest. Barbara Riggs, of Maryland, was high individual and Robert Barton, also of Maryland, was second high scoring individual in the judging of all classes.

Club members exhibited 358 4-H dairy animals at the State Dairy Show held at Timonium. During the year, 500 dairy animals were exhibited by 250 4-H members at field day shows.

Dairy Herd Improvement Associations are providing testing service in 19 of Maryland's 23 counties. There are 41 associations testing 822 herds and 27,917 cows in Maryland. This is approximately 11 percent of all the dairy cows in Maryland. Cows enrolled in Dairy Herd Improvement Associations produced an average of 8,510 pounds of milk and 354 pounds of butterfat as compared to an estimated 5,600 pounds of milk and 225 pounds of butterfat per cow. This increased average production represents the value of production testing to Maryland dairymen.

Entomology

Spraying roadside near C & O Canal, Hancock, for mosquitoes.

Cereal crop insects that came up for attention in 1951 were armyworm, European corn borer, corn earworm, hessian fly, and thrips on corn and wheat. None of these caused excessive damage similar to the armyworm damage of 1950, however the annual loss from these probably amounts to over $5,000,000 a year. By showing how many of these losses can be prevented, by use of insecticides and cultural practices, considerable saving in produce can be made.

Farmers probably spend more effort and money on the control of the insects infesting fruit crops than on any other group of crops in the State. All apples and peaches in commercial orchards are sprayed six to ten times a year, regularly, and a large part of the strawberries are dusted. The Entomology Department works constantly to determine the spray materials and the timing that will give best results as to freedom of insect injury and as to finish of fruit. Emphasis was put in 1951 on a comparison of concentrated sprays and conventional dilute sprays. Results were equal with saving in labor when applying the concentrates.

Another major cause of loss is the Japanese beetle. It damages corn, soybeans, peaches, raspberries, ornamental plants, shade trees, and turf. A constant effort, reaching into every county, is made to further biological control, to improve our means of insecticidal control and to teach people how to use effective control measures.

During the year the entomologists made 34 trips and local observations to check on pests or ornamentals. Also 83 inquiries from county agents and individuals were answered by letter or telephone. These inquiries and observations included pests on 43 kinds of plants. Of special interest in 1951 were insects of azaleas, elm, pine, and rose.

The meadow spittlebug had done increasing damage to clover and alfalfa for some years and it became the subject of special emphasis in 1951. Working with the Agronomy Department and county agents, spraying demonstrations were made on 16 farms in four counties. Additional observations were made on seven farms. As a result of spraying the yield of cured red clover hay in the first cutting was increased 397 pounds per acre and alfalfa hay was increased 112 pounds per acre. In two fields of red clover the increase of hay was 1,900 and 2,300 pounds. It is believed it will pay to spray red clover every year. Only one application of spray is required and the necessary spray machinery is moderate in cost.

The benefit from spittlebug control on alfalfa was less marked; however, later cuttings of alfalfa will probably be benefited by spraying for insects in midsummer.

Publicity on termite control had two aims: to teach effective control and to teach caution in the hiring of unknown exterminators. Special emphasis was given the value of incorporating features in original construction that will prevent trouble from termites in the final building. It brought 175 inquiries from individuals over the State who were confronted with termite control problems.

Pests of tobacco plant beds and growing crops were the subject of farm visits and news releases. Special attention was given to the timing of airplane dusts for aphid on tobacco and Fact Sheets were prepared on general insect problems in tobacco.

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Fourteen Maryland towns, from Hancock to Crisfield, used spray equipment to fight mosquitoes and flies. The demonstrations were supplemented with education on the need and effectiveness of drainage and larvaciding of mosquito breeding areas.

In the field of rodent control, warfarin as a safe and effective rat and mouse poison, was publicized and demonstrated in a number of ways during the year. Special demonstrations were put on to show control of groundhogs and orchard mice.

Seven regional apiary inspectors inspected 4,642 colonies in 356 apiaries. They found American foulbrood present in 7 percent of the apiaries with diseased colonies appearing in seven counties.

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Forestry

Small trees, like youngsters need care and training to reach their maximum values. Trees and boys grow well together.

Extension farm forestry was designed to help Marylanders with the care, improvement and use of forests and forestry products. Over 2700 persons witnessed 52 demonstrations. These included reforestation and management of new plantings, care and improvement of the farm woods, how to raise Christmas trees, chipping wood for litter, bedding and mulching, managing holly stands, identification of trees, and other forestry problems. Increased interest was shown in demonstrations showing how to use home-grown materials in making Christmas decorations.

The Extension forester, through 115 talks, 5 magazine articles, 7 news releases, 7 radio broadcasts and 2 telecasts, brought information on timely subjects to many Maryland residents. A Fact Sheet explaining the suitable uses of home-grown lumber for farm buildings proved unusually popular.

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4-H Club Work

Keynoting 4-H Club activities for 1951 was the theme "Working Together for World Understanding." This cooperative theme brought 13,611 Maryland boys and girls under the 4-H banner during the year. The youngsters were enrolled in a total of 668 individual 4-H Clubs. Cooperation and help was given to the club program by 1,174 adult volunteer leaders with the assistance of 359 junior leaders.

These leaders, in the desire to know their job better, attended 117 county leader training meetings and nearly 800 attended one of the seven all-day training schools held on an inter-county basis. The leader's job was made easier and more effective through the monthly editions of the National 4-H News provided by a friend of 4-H Club work.

"Working together" in 4-H Club work starts in the home, on the farm and in the local club. Efforts were made during 1951 to develop greater parental understanding of the club program through special materials for parents. Each club was encouraged to have a parents' night as a means of keeping parents informed.

A new Program Book was designed and provided to clubs in an effort to encourage "working together" in fulfillment of the clubs' objectives. The Maryland Bankers' Association has provided special awards through recognition of club activities and achievements.

The 4-H Dairy Cattle Judging Team became world champions in 1951.

The annual parade of 4-H floats at the Maryland State Fair was a vivid portrayal of what can be accomplished through cooperation and unity of action by the membership of more than 40 4-H Clubs.

Four-H Club members made their usual contribution to food and fibre production of the nation. The enrollment in meat animal, poultry, garden and crops projects remained at about the same level of former years. Improved methods of production were emphasized. The 4-H Club member has often been the first to try a new practice on the home farm. This has been especially true with the swine club work in the introduction of swine sanitation and pastures. The 4-H broiler projects have demonstrated to members and parents the values of using a broiler strain chick and a high energy broiler ration.

The 4-H Club program is enriched by the inter-county, state, inter-state, national and international 4-H Club activities. The inter-county broiler shows at Cordova and Westminster enabled 4-H Club members to develop a greater understanding of the economics of the broiler business and learn the importance of following sound management practices. The inter-county spring dairy cattle and steer shows at Centerville and McDonogh helped each exhibitor evaluate the kind of animal he had and the job he was doing.

The largest State events were 4-H Club Week at the University of Maryland and the State Fair at Timonium. Nearly 1,250 boys, girls, and leaders attended the 29th 4-H Club Week. It was the largest number in the history of the event. Club Week rates high in the lives of hundreds of boys and girls. They say, "It's a chance to meet and exchange ideas with boys and girls from all over the State;" "My first visit to our State University;" "It's the time I made up my mind to go to college;" "The first time I knew how it felt to be away from home;" and "It's

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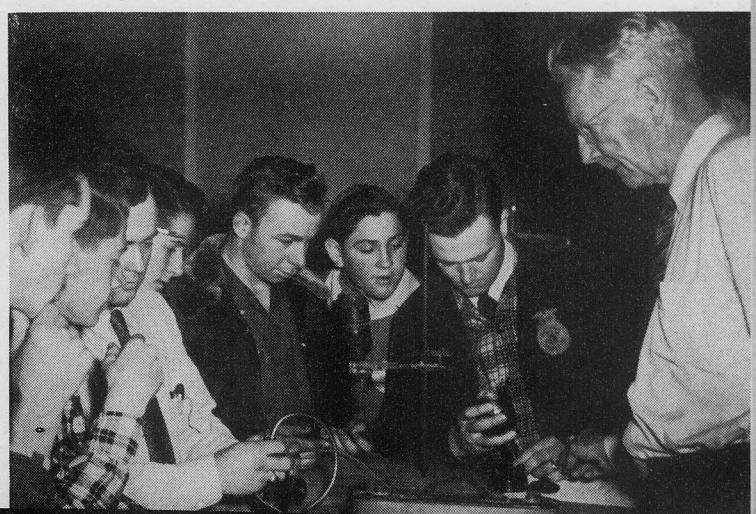
Learning about ignition is part of the Tractor Maintenance Program.



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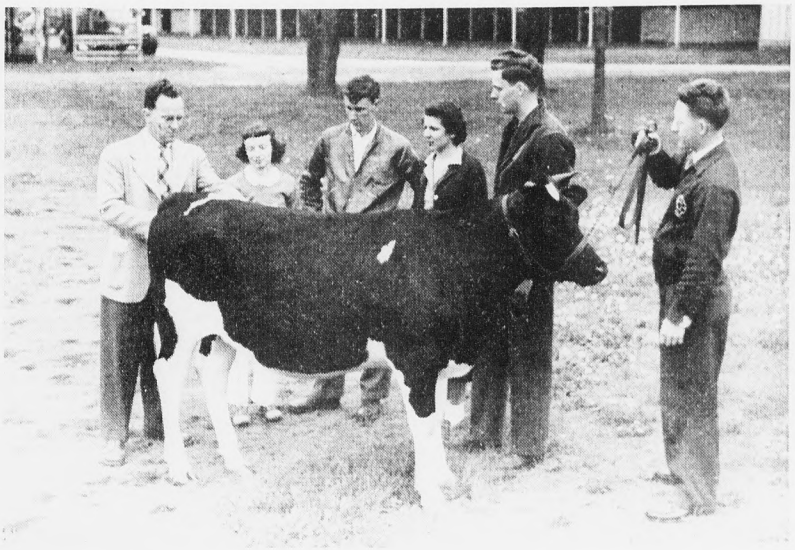

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4-H Club Work

a fulfillment of my dreams since I joined 4-H." Club Week, which has been referred to as "Five Glorious Days," is an inspiring leadership-developing experience. It was even more inspiring in 1951 because it was climaxed with a fitting ceremony marking the thirtieth anniversary of the founding of the Maryland 4-H All Stars, an honorary 4-H Club group.

The 4-H part of the Maryland State Fair was held prior to the regular fair for the first time in history. The purpose of the change was to eliminate the congestion of the usual fair and thereby provide an opportunity to do a better educational job through the exhibit and contest program. The 4-H'ers who wanted to exhibit in the open classes remained at the fair the second week. The statistics on the 4-H exhibits at the State Fair were: tobacco, 12; dairy cattle, 349; beef cattle, 77; swine, 101; and vegetable displays, 11.

A special event of the year was the 4-H Citizenship Tour to the State Capital. Two-hundred-seventy-five older 4-H members journeyed to Annapolis where they toured the U. S. Naval Academy and the State House, met the Governor at a special luncheon and saw the State Legislature in action.

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The annual National 4-H Club Congress serves as a climax on the state of 4-H activity. Thirty-three Maryland boys and girls made the trip to Chicago this year. All had records of achievement in project work and in leadership. Members of this group had an average of more than seven years of 4-H Club activity. The quality of their work is best illustrated by the fact that 10 were awarded college scholarships. To many, these $300 scholarships will be the beginning of a college career—a career that will lead to new vistas of individual opportunity.

It is impossible to make a complete report of 4-H Club work in any one year. It is only possible to enumerate a few of the many activities. However, even figures or lists cannot show the experience and security a young person gains from skills developed in 4-H Club farming or homemaking projects. The influence of 4-H experiences may not be fully realized for years to come, yet it is an established fact that club work is helping to shape the destiny of agriculture and rural citizenry of the State.

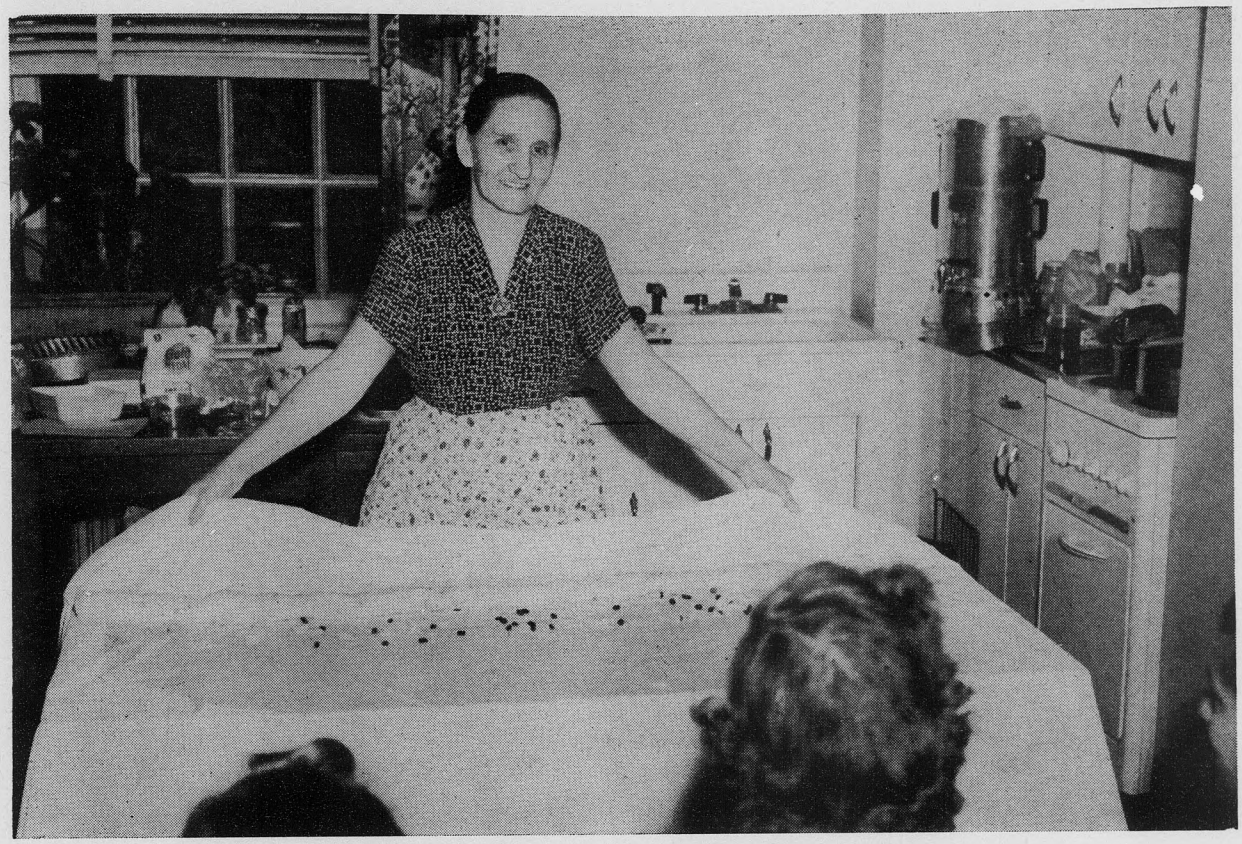
Home Economics

Home demonstration work in Maryland took a big step forward in 1951. There was a 10 percent gain in enrollment as 1,560 new members joined Homemakers Clubs and 120 new clubs were organized. This brought the total membership to 17,202 with a total of 606 clubs actively participating in the program.

These clubs, meeting at regular intervals, took up the study of home economics as a science. They gave primary attention to foods and nutrition, clothing, home management, home furnishing, and family life.

In addition to learning the latest and most scientific methods of homemaking they studied various cultural topics to enrich their home and community life.

Weaving is one of the crafts taught in home demonstration work.



One of the classes at Rural Women's Short Course.

For the most part, the educational work was given through demonstrations and lectures on home economics. Material for the lessons was prepared by Extension specialists and home demonstration agents.

Looking toward future homemaking horizons, home demonstration personnel and volunteer leaders trained 7,308 4-H Club girls in 1951. These girls, ranging in age from 10 to 21 years, studied projects designed to teach them a basic knowledge of homemaking skills.

In January, 1951, for the first time, a specialist was employed in the field of family life. The main purpose of the project was to give information and guidance to families in solving problems of human behavior and thus further the ideal of better living.

During 1951 the specialist gave 129 talks on family life, and it was estimated that over 3,200 families were helped in child development problems. The specialist reported that even men were interested in the study of parent and child development, for about 230 of them participated in the educational program. The most popular topics offered during the year were "Growing Old Gracefully", and "Understanding the School Age and the Adolescent Child."

Clothing construction projects were planned to reach women of various levels of sewing skill, from the hesitant beginners to those who wished to master the difficult techniques of tailoring. Homemakers were also taught the care, selection, storage, mending and remodeling of garments. Nearly 29,000 women were helped with clothing construction problems, and about 25,500 were helped with their care, selection and other problems.

To improve food and nutrition habits of Maryland families, home demonstration personnel gave instruction in food preservation and storage in 346 communities. Nearly 32,000 families were taught methods of food preparation and almost that number were helped to improve their diets.

In the home furnishing field, nearly 26,000 families were helped in selecting home furnishings or equipment while over 25,500 received help in remodeling or refinishing furniture. Suggestions were given to many homemakers who asked for help in the arrangement of furniture.

4-H Club Work

a fulfillment of my dreams since I joined 4-H." Club Week, which has been referred to as "Five Glorious Days," is an inspiring leadership-developing experience. It was even more inspiring in 1951 because it was climaxed with a fitting ceremony marking the thirtieth anniversary of the founding of the Maryland 4-H All Stars, an honorary 4-H Club group.

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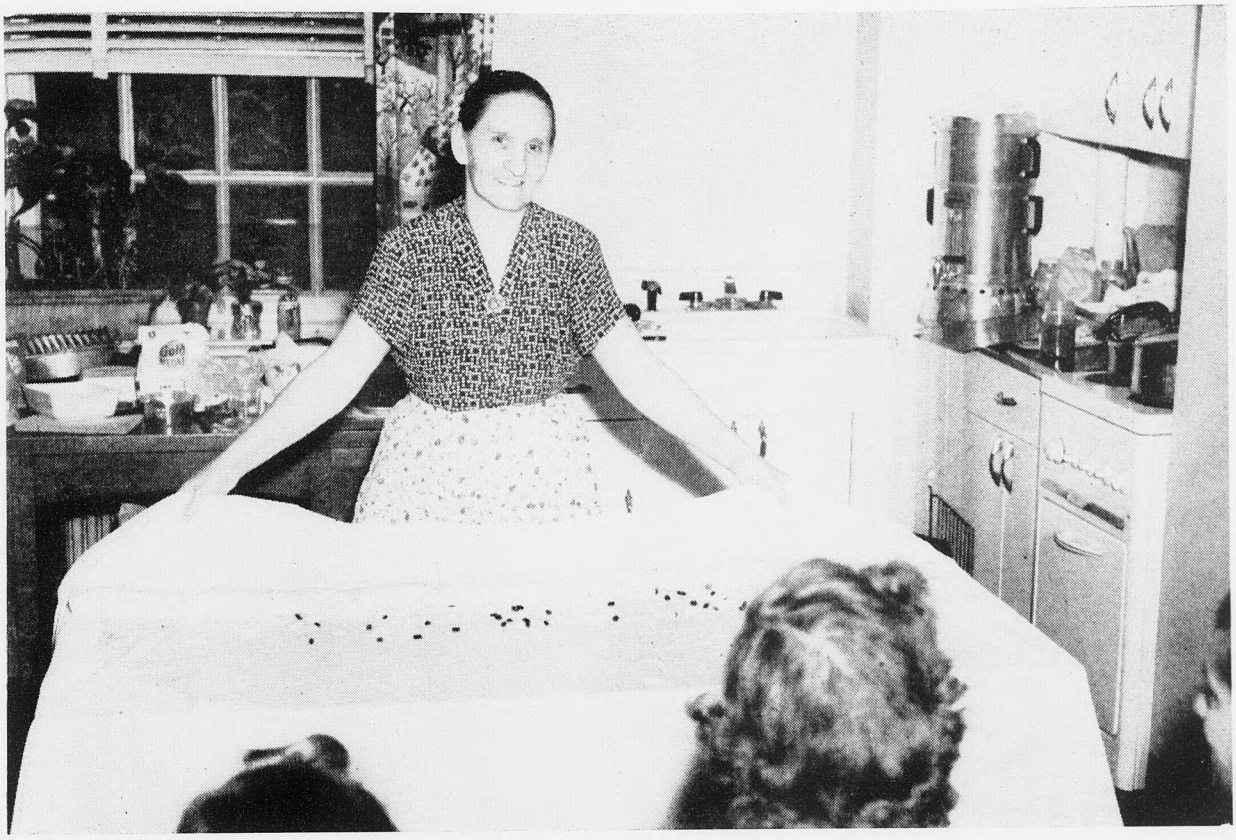

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Home Economics

A demonstration on strudel making.

In addition to regular project work the homemakers are assisted in other home and community activities. For example, about 7,000 families were helped to improve recreation in the home and further work was done to improve community recreation. In the home management field, special attention was given to improving church kitchens.

Approximately 2,000 people enrolled in handicraft projects and home demonstration personnel also made suggestions as to the establishment or maintenance of hot lunch programs for 86 schools. Demonstrations were given in creative arts such as tray painting, ceramics, the making of hooked rugs and aluminum trays. About 15,000 aluminum trays were made in the state by homemakers in 1951.

Since the demand upon home demonstration personnel grows heavier every year, the specialists and agents trained 6,453 volunteer leaders in 1951. The leaders, in turn, gave training to many more women.

To recognize and show the value of achievements of the home demonstration staff and homemakers, a special week, National Home Demonstration Week, is set aside for them each year. The homemakers took over most of the 1951 program themselves. They held exhibits and tours, staged plays, gave television and radio broadcasts and publicized their work by newspaper articles and talks.

The highlight of 1951 was the twenty-fifth anniversary of Rural Women's Short Course, Founded in 1923 by Miss Venia M. Kellar, the Short Course has become an institution among the rural women of Maryland.

In 1923, its first year, 241 women attended. But in succeeding years the Short Course attracted more and more women, for they realized the value of classes in home economics, the lectures and the opportunity to meet with other homemakers of the State. Many of the women returned again and again to attend "College Week for Women", as the Short Course is often called.

The Short Course drew the largest attendance in its history. Over 1,300 women attended classes in foods and nutrition, home furnishing, public speaking and personality development, clothing, journalism and radio, art appreciation, modern crafts, effective speaking, home management, family life, landscape gardening, parliamentary law, flower arrangement and music appreciation.

They listened to lectures and concerts, attended a vesper service and a reception, and toured Washington, D. C. At the end of the week the women went home inspired and better equipped to carry out the theme of home demonstration work, "Today's Home Builds Tomorrow's World."

Horticulture

Spraying increases tomato yields and improves quality.

With prospects of continued shortage of farm labor, considerable emphasis in Extension work with fruit growers was placed upon efficiency in all production practices and increased mechanization where capital and size of production units warranted such expenditures. Also as in the past, the value and the methods of achieving soil improvement, improved pest and disease control, tree removal, use of better soils and sites in replanting were stressed. New varieties and increased plantings were recommended only after careful consideration. Considerable publicity and personal work was given to removal of any type of unprofitable trees. Maximum production of quality fruit continues to be a most important goal both for present profit to gowers and for the future of the industry. Growing apples for the processor has lured much fruit from the fresh market, with its exacting demands of grade, pack, and package. However, the past season showed the folly of such planning as the by-products market became saturated and prices dropped. Luckily, the growers have been warned and there was a surprising amount of good stock on the fresh market, with heavy withholding of small or inferior apples from the fresh market as had been recommended.

Demonstrations were conducted in all parts of the State to show type of procedure considered best adapted to existing conditions, these demonstrations being as follows: pruning 54; fruit thinning 29; mouse control 13; and grafting for tree repair 3. Weed control in strawberries was demonstrated in several places with indifferent results but more trials are essential as this problem threatens the berry industry. A state-wide winter indoor meeting and summer field meeting were held in addition to 9 county grower meetings; also 155 advisory visits were made. Several radio and one television program were included in the publicity program in addition to monthly newsletters, personal correspondence and revision of mimeograph pamphlets and spray calendar.

Closer cooperation has been promoted between the fruit growers of Maryland and those of the adjoining states as a step toward better marketing of a better product and as a means of solving some of the larger problems of the fruit industry.

Cooperation has been continued also with adjoining state horticultural societies in working toward solution of problems and with the regional grower-supported sales promotion organization by assisting in encouraging observance of National Apple Week and coordinating the Federal School Lunch program.

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The increased school building in the state has offered an opportunity for real service in the designing of and proper landscape planting and planning of the school grounds. Often times funds for such plantings are not included in the building costs. In such cases school groups, parents' organizations, or other local or civic groups undertake such a program. Such planting and development may be done over several years period and it gives a worthwhile project for civic improvement.

Garden schools of instruction for the county Extension staff, as well as for county leaders and the general public, served to reach a large number of people. Individual talks to garden clubs and other civic groups reached a large group of home owners.

The work with the commercial florists and nurserymen was done primarily in two ways, by sponsoring of a special one-day program at the University and by individual visits.

The Tomato Improvement Program proved to be an important part of the 1951 vegetable program. Information provided growers through Tip Sheets in previous years was assembled and printed in the new Fact Sheet publications. More growers were reached than in any other year and a gradual improvement in production practices may be noticed.

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Information and Publications

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Eight thousand Marylanders requested approximately 70,000 publications from the Extension Service headquarters at College Park. Approximately 260,000 publications were distributed through the Extension offices in the counties. In total, this represented a considerable increase in the number of publications used by Maryland people.

This increase was due largely to the timely introduction of a very useful and new type of publication called "Fact Sheets." Reports are coming in from readers all over the state telling how much they appreciate the brief, clearly written, well illustrated, colorful and easy-to-read publication. In addition, many bulletins and other miscellaneous types of publications helped to round out a successful program.

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The Extension Service also has approximately 315 films in its film library. Specialists, Extension agents, various agricultural and homemaking organizations, and civic groups showed these films 2,770 times to a total audience of approximately 221,000 people.

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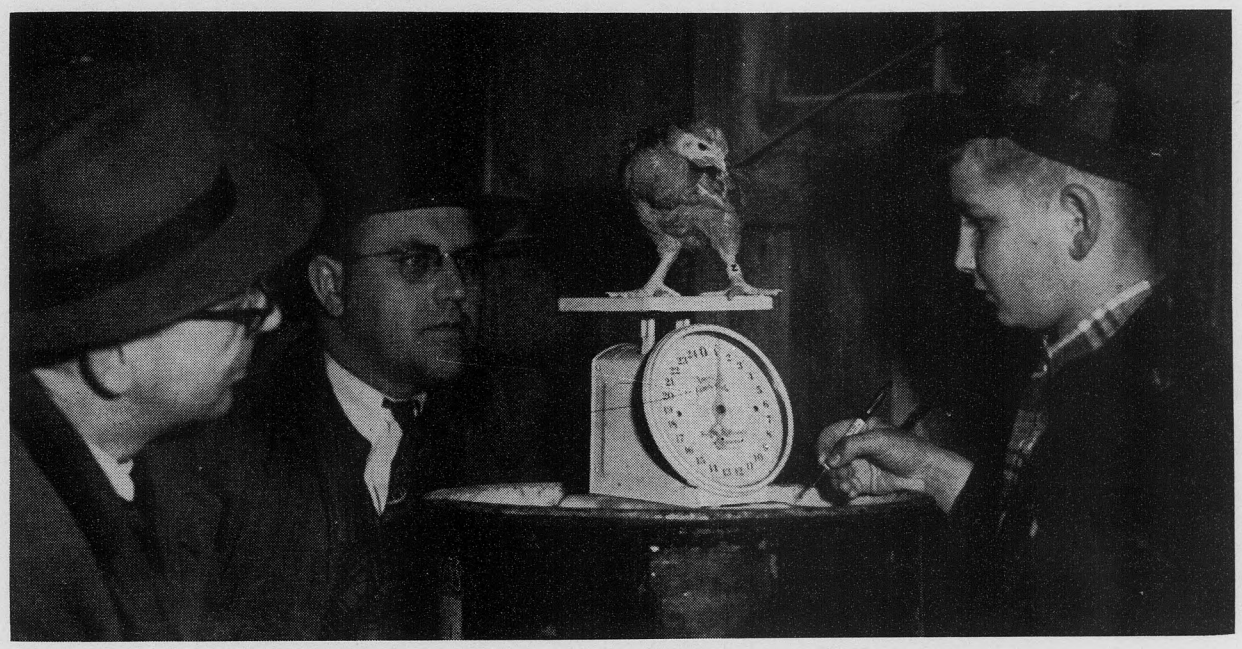
Poultry



A 4-H boy learns that records are important in the broiler business.

The search for a more efficient broiler breed by broiler growers continues unabated since the Chicken of Tomorrow program was started in 1946. Two Maryland breeders were represented in the National Chicken of Tomorrow test at the University of Arkansas in 1951 by virtue of their state and regional showings in 1949 and 1950. These entries placed 8th and 10th in average weight at 12 weeks of age in the National test.

Fourteen adult entries and eighty junior entries in the 1951 Maryland Chicken of Tomorrow project, conducted by the specialists, attests the popular interest of Maryland poultrymen in the search for better strains and methods in producing better quality broilers more economically.

Cooperation of Extension specialists with the State Poultry Council and local poultry industry organizations contributed materially to keeping the industry of the state abreast of the times. These groups planned their State Poultry Yearbook, meeting programs, educational tours, the Delmarva Chicken Festival at Salisbury, and worked together in cooperative marketing activities as well as regional and national industry organizations' programs.

The State Poultry Products Show in Baltimore attracted 246 entries of eggs and chicks and was attended by over 500 producers. A recognition program for producers of high quality eggs was continued in 1951. This program included inspection of egg quality at the farm and at the market and was carried on with some of the cooperative markets in the State.

The 4-H Club teaching projects have been a major activity of poultry specialists, with emphasis on the development of judging and demonstration teams and exhibits. These included supervising the State Poultry Judging Contest, with 11 county teams entered; and the State team which took part in the Northeastern Regional Contest at Boston; the State Egg Judging Contest, with 7 county teams entered; and the Northeastern Egg Judging Contest at Harrisburg, Pennsylvania; State Miniature Booth Exhibits; and 4-H Club Week Classes.

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Poultry

Numerous poultrymen were advised on housing, feeding, marketing, and management problems by both personal visits and correspondence from the specialists. Several turkey breeders have been aided in selecting and breeding better fleshed turkeys, and Record of Performance breeders were aided in their record-keeping and breeding programs.

Numerous news and seasonal articles for county and daily papers were prepared, over a dozen recordings for radio broadcasts were made, 3 television programs were given and 3 Fact Sheets and a bulletin were written by the specialists on new and timely developments of concern to poultrymen.

Maryland poultrymen will benefit from demonstration trials carried on at the University's broiler substation at Salisbury in 1951. The studies were made to find the effect various supplements in basal broiler rations have upon mortality, feed conversion, growth, and market quality. They also made a comparison of the results of two types of heating upon broilers. These trials supplied needed information for educational activities with broiler producers in the state.

These tests pointed out that: (1) 2½% fish meal or 5% crab meal provided adequate levels of animal protein for a broiler ration; (2) best results were obtained when either of these supplements, together with an antibiotic (terramycin) was added to an otherwise simple broiler ration; (3) feathering condition at 10 weeks of age in radiant heated pens without litter was decidedly inferior to that in pens with overhead hot water heat and litter; and (4) the addition of nicotinic acid, pantothenic acid, and iodinated casein to the basal ration markedly improved the feathering in radiant heated pens.

Tests for more detailed study of performance of various strains, breeds, and crosses of interest to Maryland broiler producers are planned.

Soil Conservation

In order to reach the greatest number of people and influence them to become conservationists in their actions and thinking, the Extension soil conservationist continued to work through conservation leaders and educators.

Much progress was made in furthering the establishment of Soil Conservation practices in the twenty-three Districts of the State.

A 4-H Conservation Exhibit in a bank during Land Week.

Probably the greatest influence has been brought about through close cooperation with Soil Conservation District Supervisors. An effort was made to attend as many regular Supervisors' meetings during the year as possible. In addition, more effort was put into the planning of the two statewide meetings of District Supervisors. This effort was pointed toward the objective of helping District Supervisors accept and carry out their responsibilities more completely and thereby get more conservation on the land, resulting in a more prosperous and happy farm life. The number of new cooperators in the Districts was about the same in 1951 as in 1950. During 1951, however, more emphasis was placed on getting formers to apply planned conservation practices than on getting new cooperators.

Maryland Land Week was again a huge success. Most counties of the state organized local steering committees and thousands of both farm and nonfarm adults as well as school children were reached. The most effective activity for school children was the tours which were held all over the state. Speakers on conservation were obtained for two of the largest service clubs in Baltimore.

The Maryland State Department of Education is in the process of preparing a general booklet on conservation and special booklets on various phases of conservation, to be used in the schools of the state. The Extension Soil Conservationist and other members of the Extension staff have given much assistance with these booklets.

Extension Work With Negro Families

A Federal tobacco grader gives grading instructions to a group of Negro farmers.

Extension workers found that the Negro farm families and rural non-farm families were eager to adopt recommended farm and home practices. The educational program was carried on by thirteen Negro agents working in 6 counties of Southern and Western Maryland and 4 counties on the Eastern Shore.

These agents worked with specialists from the University of Maryland as well as with local leaders, advisory boards, county councils, and farmers and homemakers associations, to distribute information on improved practices to most of the families in the 10 counties.

In the process of conducting Extension work in the state in 1951, Negro agents influenced 3,073 farm families and 3,772 rural non-farm homes. Local leaders conducted 493 meetings which were attended by 8,003 people. The agents made 3,785 farm and home visits, received 2,751 office calls and 4,971 telephone calls relating to Extension work. They gave 904 method demonstrations to adults and 4-H boys and girls with a total attendance of 8,641 people. Ninety-two result demonstrations were observed by 2,931 persons.

The need for economy during the period of high living costs put the spotlight on the assistance offered through the Home Demonstration program. Families readily adopted new practices designed to improve home furnishings, clothing, meal planning, and food preservation.

Farmers cooperating with the Extension Service made rapid improvement in their farming operations. Over 2,000 tobacco growers took an active part in improving their practices in the production and marketing of their crops. Result demonstrations in tobacco disease control were conducted in 5 counties in 1951. The demonstrations were well distributed to enable every grower in Southern Maryland to make first-hand observation of the practice.

A tobacco marketing program was carried on throughout the area in cooperation with tobacco specialists and the Tobacco Branch of the Production Marketing Administration. Many farmers report incomes from their crops were boosted as much as one third as a result of proper preparation of their leaf.

Requests for assistance in general farm program improvement showed a marked increase in 1951. The agents gave special assistance to farmers throughout the area in soil conservation practices, fertilization of crops and setting up diversified farm programs.

The interest of farmers in improving their livestock programs was evident throughout the State. The feed crops and soil improvement program encouraged the growth of the work with livestock. The purebred 4-H pig clubs inspired many farmers to improve their herds. Better permanent pastures are making it possible for the growth of the beef cattle enterprises on tobacco farms in Southern Maryland.

Poultry

Numerous poultrymen were advised on housing, feeding, marketing, and management problems by both personal visits and correspondence from the specialists. Several turkey breeders have been aided in selecting and breeding better fleshed turkeys, and Record of Performance breeders were aided in their record-keeping and breeding programs.

Numerous news and seasonal articles for county and daily papers were prepared, over a dozen recordings for radio broadcasts were made, 3 television programs were given and 3 Fact Sheets and a bulletin were written by the specialists on new and timely developments of concern to poultrymen.

Maryland poultrymen will benefit from demonstration trials carried on at the University's broiler substation at Salisbury in 1951. The studies were made to find the effect various supplements in basal broiler rations have upon mortality, feed conversion, growth, and market quality. They also made a comparison of the results of two types of heating upon broilers. These trials supplied needed information for educational activities with broiler producers in the state.

These tests pointed out that: (1) 2½% fish meal or 5% crab meal provided adequate levels of animal protein for a broiler ration; (2) best results were obtained when either of these supplements, together with an antibiotic (terramycin) was added to an otherwise simple broiler ration; (3) feathering condition at 10 weeks of age in radiant heated pens without litter was decidedly inferior to that in pens with overhead hot water heat and litter; and (4) the addition of nicotinic acid, pantothenic acid, and iodinated casein to the basal ration markedly improved the feathering in radiant heated pens.

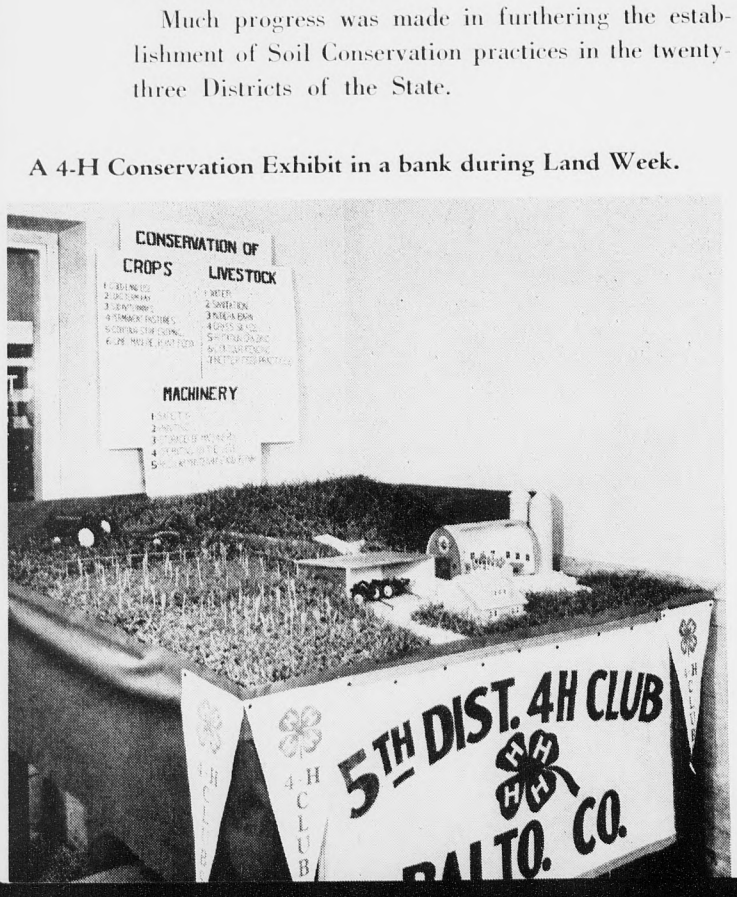
Tests for more detailed study of performance of various strains, breeds, and crosses of interest to Maryland broiler producers are planned.

Soil Conservation

In order to reach the greatest number of people and influence them to become conservationists in their actions and thinking, the Extension soil conservationist continued to work through conservation leaders and educators.

Much progress was made in furthering the establishment of Soil Conservation practices in the twenty-three Districts of the State.

A 4-H Conservation Exhibit in a bank during Land Week.



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Extension Work with Negro Families

As an example of progress in livestock work, 8 years ago a one-crop tobacco farmer cooperated with the Extension Service and set up a livestock program on his farm. Today he has a foundation herd of 36 head of cattle, has marketed 90 animals, and his income from livestock is financing a college education for 3 of his children.

Extension agents did not limit their assistance to production, but cooperated with families interested in learning efficient ways to use their money for better living. These general activities included purchasing of farm and home equipment as well as improving homes, diets, clothing, health and sanitation. The entire Extension staff directed demonstrations in producing the home food supply from improved gardens, poultry and swine.

An increase in the number of Negro 4-H Clubs and in club membership was brought about in 1951. Notable progress was shown in the improved quality of 4-H projects which had a favorable influence on the 2,975 members enrolled in 89 different clubs.

By enlisting help from more volunteer adult 4-H Club leaders, churches, and civic organizations, 4-H work has become an important part of the over-all Extension program. Activities conducted for club members centered around clothing, food preservation, canning, meat animals, gardens, field crops, poultry, and tractor maintenance. State achievement contests were conducted in all these lines of work. On every hand 4-H Club work is proving its worthwhile contribution toward building citizenship, business ability, and a better knowledge of farm and home practices among the rural Negro boys and girls in the State.

Miss Venia M. Kellar Retire

Miss Venia M. Kellar, who for 34 years was on the staff of the University of Maryland Extension Service, retired on March 31, 1951. Miss Kellar began her work as home demonstration agent in Dorchester County in 1917, and one year later came to the University of Maryland as state leader of home demonstration agents. In 1935 she was named assistant director of Extension.

A native of Nebraska, Miss Kellar graduated from Wesleyan University at Lincoln. For a time she served as principal of a school in Western Nebraska, a position which she later resigned to become the first home demonstration leader in South Dakota.

She took advanced study at the University of Nebraska and Columbia University and then began work in Maryland. During her 33 years of pioneer work as state leader of home demonstration agents and as assistant director of Extension, Miss Kellar established a broad, well-planned home demonstration program. She is especially noted for Rural Women's Short Course, which she started in 1923.

Miss Venia M. Kellar

Summary of Work In The Counties

	1951
Number of farms in the State	36,109
Farm and home visits made by Extension agents	25,601
Number of different farms and homes visited	13,522
Office calls relating to Extension work	59,596
Telephone calls	109,403
Number of articles published	7,958
Number of bulletins distributed	120,008
Training meetings held for local leaders	1,531
Attendance at these meetings	24,446
Method demonstration meetings held	7,111
Attendance at these meetings	149,656
Educational tours conducted	244
Attendance on tours	11,854
Achievement days held	325
Attendance at achievement days	56,302
Other meetings participated in by Extension agents	6,521
Attendance at these meetings	509,994
Farms on which changes in practices resulted	21,585
Meetings held by local leaders	5,770
Attendance at these meetings	91,933
Farms reached this year for the first time	4,171
Farm homes in which changes in practice resulted	10,516
Farm homes reached this year for the first time	2,409
Number of other homes in which changes in practices resulted	28,832
Number of other homes reached this year for first time	18,310
Number of 4-H Club members enrolled	13,611
Number of projects completed by 4-H Club members	24,429
Number of families influenced by Extension program	63,637

Administration

H. C. Byrd.....President

Gordon M. Cairns.....Dean of Agriculture

Extension Service

Director.....James M. Gwin
Assistant Director.....Venia M. Kellar
Assistant Director.....Ernest N. Cory

County Agent Leader.....John W. Magruder
Assistant County Agent Leader.....Arthur E. Durfee
State Boys 4-H Club Leader.....Mylo S. Downey

State Girls 4-H Club Agent.....Dorothy Emerson

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County Agent Leader ..... John W. Magruder

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Department Heads

Agricultural Economics	P. E. Nystrom
Agricultural Education	A. M. Ahalt
Agricultural Engineering	R. W. Carpenter
Agronomy	A. O. Kuhn
Animal Husbandry	J. E. Foster
Botany	Ronald Bamford
Dairy	J. W. Pou
Entomology	E. N. Cory
Horticulture	I. C. Haut
Information and Publications	J. C. Evans
Poultry	M. A. Jull
State Department of Markets	P. E. Nystrom

County Extension Staff

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R. F. McHenry, Agricultural Agent; Maude A. Bean, Home Demonstration Agent; J. M. Steger, Assistant Agricultural Agent; Thelma Allin, Aassistant Home Demonstration Agent.

Anne Arundel County, Annapolis

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F. M. Rogers, Agricultural Agent; Bessie M. Spafford, Home Demonstration Agent.

Carroll County, Westminster

L. C. Burns, Agricultural Agent; Evelyn D. Scott, Home Demonstration Agent; James Pasike, Jr., Assistant Agricultural Agent; Barbara Ann Young, Assistant Home Demonstration Agent.

Cecil County, Elkton

J. R. Schabinger, Agricultural Agent; Martha Lumpkin, Home Demonstration Agent; R. G. Miller, Assistant Agricultural Agent.

Charles County, La Plata

P. D. Brown, Agricultural Agent; Mrs. Anna S. Wills, Home Demonstration Agent; Wm. E. Garvey, Jr., Assistant Agricultural Agent.

Dorchester County, Cambridge

H. W. Beggs, Agricultural Agent; Hattie Brooks, Home Demonstration Agent; C. W. Crawford, Assistant Agricultural Agent; Mrs. Dorothy Fox, Assistant Home Demonstration Agent.

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J. H. Carter, Agricultural Agent; Ethel Grove, Home Demonstration Agent; J. A. McHenry, Assistant Agricultural Agent.

Harford County, Bel Air

H. M. Carroll, Agricultural Agent; Virginia McLuckie, Home Demonstration Agent; B. W. Kelly, Assistant Agricultural Agent; Jane Boyd, Assistant Home Demonstration Agent.

Howard County, Ellicott City

W. G. Myers, Agricultural Agent; Catherine E. Cleveland, Home Demonstration Agent; R. D. Martin, Assistant Agricultural Agent.

Kent County, Chestertown

J. D. McVean, Agricultural Agent; Vivian Winston, Home Demonstration Agent; S. B. Sutton, Assistant Agricultural Agent.

Montgomery County, Rockville

O. W. Anderson, Agricultural Agent; Edythe M. Turner, Home Demonstration Agent; R. N. Whipp and J. B. Morris, Assistant Agricultural Agents; Christine Blake, Assistant Home Demonstration Agent.

Prince Georges County, Upper Marlboro

P. E. Clark, Agricultural Agent; R. L. Jones, Assistant Agricultural Agent; Hyattsville—Ethel M. Regan, Home Demonstration Agent; Jane M. Cole, Assistant Home Demonstration Agent.

Queen Annes County, Centreville

J. W. Eby, Agricultural Agent; Ruby Brant, Home Demonstration Agent; R. L. Cain, Assistant Agricultural Agent.

St. Marys County, Leonardtown

J. J. Johnson, Agricultural Agent; Ethel Joy, Home Demonstration Agent; Wm. E. Garvey, Jr., Assistant Agricultural Agent.

Somerset County, Princess Anne

C. Z. Keller, Agricultural Agent; Hilda Topfer, Home Demonstration Agent.

Talbot County, Easton

R. S. Brown, Agricultural Agent; Margaret Smith, Home Demonstration Agent; C. W. Crawford, Assistant Agricultural Agent.

Washington County, Hagerstown

M. K. Miller, Agricultural Agent; Ardath Martin, Home Demonstration Agent; R. G. Mueller, Assistant Agricultural Agent; Margaret Watson, Assistant Home Demonstration Agent.

Wicomico County, Salisbury

J. P. Brown, Agricultural Agent; Nell Grim, Home Demonstration Agent; L. E. Wheatley, Assistant Agricultural Agent; Evelyn Barker, Assistant Home Demonstration Agent.

Worcester County, Snow Hill

R. T. Grant, Agricultural Agent; Laura Belle Harter. Home Demonstration Agent.

Negro County Agents

M. G. Bailey, District Agent, Box 5302, Seat Pleasant.

Anne Arundel County, J. R. Jennings, Huntingtown.

Caroline County, E. Robbins, Box 177, Federalsburg.

Charles County, M. Hull, Bryans Road.

Montgomery County, O. L. Privette, c/o M. Bailey, Box 5302, Seat Pleasant.

Prince Georges County, J. R. Taylor, Court House, Upper Marlboro.

Somerset County, L. H. Martin, Maryland State College, Princess Anne.

St. Marys County, R. Holmes, Box 96, Lexington Park.

Negro Home Demonstration Agents

Charles County, Naomi Turner, Bryans Road.

Dorchester and Caroline County, Beatrice A. Bianchi, 27 Locust Street, Easton.

Montgomery County, Ethel Bianchi, Box 5372, Seat Pleasant.

Prince Georges County, Mrs. Hattie L. Holmes, Court House, Upper Marlboro.

Somerset and Wicomico County, Mrs. Omega M. Jones, Princess Anne.

St. Marys County, Mrs. Evelyn Ashley, Lexington Park.

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